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Private Banks and Public Money: An Analysis of the Design and Implementation of the Massachusetts Linked Deposit Program

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**PRIVATE BANKS AND PUBLIC MONEY:
AN ANALYSIS OF THE DESIGN AND IMPLEMENTATION
OF THE MASSACHUSETTS LINKED DEPOSIT PROGRAM**

by

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**Prepared for the John W. McCormack Institute of Public affairs
University of Massachusetts at Boston**

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EXECUTIVE SUMMARY

In March 1978, in accordance with the unanimous recommendations of two special commissions, the Treasurer of Massachusetts established a "linked deposit program." Under the terms of this program, a portion of the approximately \$400 million available for short-term investment from the state's General Fund was to be deposited with in-state banks and thrift institutions, selected on the basis of their performance in promoting the economic and social welfare of Massachusetts citizens and communities through their lending and related activities.

Six years after its inception, the Massachusetts linked deposit program (LDP) has grown to become a sizable and stable part of the Treasurer's investment program. By the spring of 1984, when the research for this study was undertaken, there were \$114 million of LDP deposits outstanding, at 72 of the state's approximately 400 banks. In spite of its size, however, and contrary to recommendations by both special commissions that program implementation include careful monitoring and evaluation, there has never been a systematic evaluation or review of the Massachusetts LDP.

The rationale for an LDP is straightforward: by giving preference in awarding public deposits to banks whose loan portfolios contain a relatively large amount of loans in specific publicly-designated categories, public funds would be channeled to those banks most likely to put them to socially desirable uses, and banks would have an incentive (the prospect of obtaining increased public deposits at favorable rates) to alter their overall loan portfolios in socially-desired directions. By following the lead of state Treasurers in Illinois, Missouri, and Colorado in adopting an LDP, the Treasurer of Massachusetts sought to utilize a promising mechanism for making

banking institutions responsive to the public interest as well as to the interests of their shareholders and depositors.

In fact, the recommendation by the Special Commission on State Investment that Massachusetts establish an LDP was a highly qualified one. The Commission emphasized that the program's ability to promote its stated objective would depend on the nature of the LDP adopted: "...it is crucial that [an LDP] be well-designed, well-implemented, and well-publicized."

This report presents the results of a systematic analysis of the extent to which the operation of the Massachusetts LDP meets the three-part standard articulated by the Special Commission on State Investment. After a short Introduction, Part II reviews the historical evolution and present structure of the Massachusetts LDP. Part III summarizes the methods and the results of a quantitative analysis of all of the bids by, linked deposit scores of, and LDP awards to the banks that participated in the program during 1983 (the most recent year for which complete data were available). Part IV contains a systematic evaluation of each of the major aspects of the Massachusetts LDP's design and implementation. Because one goal of this project, which was undertaken with the cooperation of the Treasurer's office, was to identify desirable changes in the program's structure and operation, a number of constructive proposals for strengthening and improving the Massachusetts LDP are included. Part V offers a brief conclusion.

Two principal conclusions follow from this study's evaluation of the design and implementation of the Massachusetts LDP. First, there is in fact no linkage in the Massachusetts linked deposit program as it is currently operated; deposits are allocated among banks independently of the banks' linked deposit scores as determined by the Treasurer's own scoring formula (see Tables III & IV, pp. 15-16). In effect, the program is operating as a

"keep-the-money-at-home" program that deposits state funds in Massachusetts banks (at slightly lower interest rates than could be earned by investing them in national money market instruments), rather than as a genuine linked deposit program, which would make the awarding of these public deposits conditional on bank performance in promoting designated economic and social public policy objectives. Second, and more generally, the Massachusetts LDP falls far short of being "well-designed, well-implemented, and well-publicized." This study identifies serious deficiencies in every program aspect reviewed.

These conclusions suggest the need for substantial reforms in the Massachusetts LDP. Among the most important of these are: re-establishing an appropriate cut-off point for dividing commercial banks into two leagues; either establishing an explicit, reasonable, and enforceable "maintenance of effort" requirement, or else eliminating the maintenance of effort requirement altogether; revising the scoring formula so that it more accurately reflects bank performance; developing an explicit formula for allocating awards among banks on the basis of their scores and other specified criteria; developing appropriate means for publicizing the program's operation and its results; creating forms and instructions that are clearer for participants and more informative for program managers; and improving data processing and reporting within the Treasurer's office.

If Massachusetts is to continue to have a linked deposit program, it should be as vigorous, visible, efficient, and effective -- that is, as "well-designed, well-implemented, and well-publicized" -- as possible. At its core must be a strong, clear, and sensible link between the allocation of public deposits and the performance of private banking institutions,

I. INTRODUCTION [1]

In March 1978, in accordance with the unanimous recommendations of two special commissions, the Treasurer of Massachusetts established a "linked deposit program." Under the terms of this program, a portion of the approximately \$400 million available for short-term investment from the state's General Fund was to be deposited with in-state banks and thrift institutions, selected on the basis of their performance in promoting the economic and social welfare of Massachusetts citizens and communities through their lending and related activities.

In adopting a linked deposit program (LDP), Massachusetts was following the lead of three other states -- Illinois (1967), Missouri (1973), and Colorado (1975). Although the structure of each state's LDP was distinctive, all were based on the basic concept that a state, in deciding how to invest the money under its control, can take into account the extent to which the lending (or other) behavior of potential depositories contributes to the achievement of the state's social and economic objectives. In particular, preference in awarding deposits could be given to banks [2] whose loan portfolios contain a relatively large amount of loans in specific publicly-designated categories, thereby establishing a "link" between a bank's lending performance and the amount of public deposits that it receives. Not only would this link result in public funds being channeled to those banks most likely to put them to socially desirable uses, but also it would give banks an incentive (the prospect of obtaining increased public deposits) to alter their overall loan portfolios in socially-desired directions. Because they provide banks with this incentive to increase their lending in particular areas specified by public policy, LDPs were regarded as

a promising mechanism for making banking institutions responsive to the public interest as well as to the interests of their shareholders and depositors.

Six years after its inception, the Massachusetts LDP has grown to become a sizable and stable part of the Treasurer's investment program. By the spring of 1984, when the research for the present study was undertaken, there were \$114 million of LDP deposits outstanding, at 72 of the state's approximately 400 banks [3]. In spite of its size, however, and contrary to recommendations by both special commissions that program implementation include careful monitoring and evaluation, there has never been a systematic evaluation or review of the Massachusetts LDP [4].

This absence of evaluation is particularly unfortunate given the controversy concerning the ability of a linked deposit program to fulfill its proclaimed objectives that marked the deliberations of both commissions. Skeptics had argued that the costs of a Massachusetts LDP would be likely to outweigh its benefits. They contended that accepting a below-market interest rate on state deposits would provide a subsidy from taxpayers to banks without providing sufficient incentive for banks to alter their lending behavior. Even if some individual banks were to make more loans in the categories designated by the program, these loans would mainly displace loans that other lenders would have otherwise provided, rather than increase the total amount of lending in the categories specified. The skeptics maintained that the relatively efficient operation of capital markets, both intra- and inter-state, made it highly unlikely that redirecting funds to even a very carefully selected set of Massachusetts banks would result in a significant net change in either the pattern or the total amount of lending within the Commonwealth. In addition, they expressed concern about the administrative

burdens that the program would place on both depository institutions and the Treasurer's office.

LDP advocates acknowledged that the state Treasury's direct interest earnings would be lower than under the existing policy of simply investing for maximum return (subject to the constraints imposed by considerations of safety and liquidity), a policy which had resulted in almost all public money leaving the state for national money markets. But they argued that the difference need not be great in a properly structured LDP; that by increasing the supply of carefully selected types of loans an LDP could promote more -- and more balanced -- economic development within the Commonwealth; and that the additional investment, jobs, housing, sales, and income made possible by an LDP might actually result in sufficient additional tax revenue (and reduced social welfare spending) to create an overall increase in net Treasury revenue. They emphasized the distinction between a simple "keep-the-money-at-home" investment policy, which would also result in increased deposits in Massachusetts banks, and an LDP, which would link the deposit of state funds to bank performance.

In light of this controversy, the final report of the Special Commission on State Investment endorsed the notion of a Massachusetts LDP in a highly qualified way. The force of the skeptics' arguments led them to emphasize that "because there are a wide variety of ways in which public deposits could be linked to bank behavior,...it is crucial that [an LDP] be well-designed, well-implemented, and well-publicized." The Commission continued:

In order to achieve its potential benefits, an LDP must be based on criteria that are effective in stimulating additional lending in categories that contribute to the economic needs of poorer citizens and communities, it must be operated in an efficient, timely, and predictable manner and it must be open to public scrutiny, both so that other depositors and community groups can make use of the information obtained about individual bank lending practices and because public scrutiny is the best single

guarantee that any public program will be administered in the public interest [1977, pp. 2, 3].

This paper reports the results of a research project that investigated the extent to which the Massachusetts LDP has met what could be called the "well-well-well" criterion enunciated by the Special Commission on State Investment. Part II offers a brief review of the historical evolution and present structure of the Massachusetts LDP. Part III summarizes the methods and the results of a quantitative analysis of the bids by, linked deposit scores of, and LDP awards to the banks that participated in program during 1983 (the most recent year for which complete data are available). Part IV contains a systematic evaluation of each of the major aspects of the Massachusetts LDP's design and implementation. Because one goal of this project, which was undertaken with the cooperation of the Treasurer's office, was to identify desirable changes in the program's structure and operation, a number of constructive proposals for strengthening and improving the Massachusetts LDP are included. Part V is a brief conclusion.

II. BACKGROUND

A Brief History.

In early 1977 the Massachusetts Social and Economic Opportunity Council, an independent, federally-funded state agency charged with promoting state policies that would further the interests of low and moderate income people, established a Special Commission on State Investment (SCSI) to investigate the potential of a linked deposit program for Massachusetts. After four months of deliberation, including review of a lengthy report from its research staff [Campen 1977], the Commission's final report cautiously

endorsed the idea. Its "principal conclusion" was

that a well-designed, well-implemented, and well-publicized linked deposit system could -- as one element of an overall policy to offset economic imbalances in the Commonwealth -- contribute significantly to the economic well-being of low and moderate income people and communities in Massachusetts.... [1977, p. 2].

In response to this report, to prodding from Massachusetts Fair Share (a powerful statewide citizens lobbying organization), and to the possibility of a liberal challenge in his 1978 bid for reelection, State Treasurer Robert Q. Crane (whose representative on SCSI had played the role of observer rather than advocate) embraced the proposal. He established a Linked Deposit Commission of his own (which included SCSI's Chairman), chaired the hearings which this Commission held around the state, and quickly accepted its recommendation, early in 1978, that he proceed with the implementation of a Massachusetts LDP.

In April 1978 the first round of LDP deposits was awarded to the twenty banks that had submitted eligible bids. Because the total amount of eligible bids, \$23.3 million, was less than half of the \$50 million that the Treasurer had set aside for the program, each bank received every dollar that it had bid for. This meant, of course, that there was no "link" between state deposits and bank performance; unless total bids exceed total awards, bank performance, as defined and measured by the LDP, cannot become a criterion in the competitive awarding of deposits [5]. By April 1979 the number of banks submitting eligible bids had more than doubled, to 42, and the deposits awarded had grown to \$34.9 million, but the system remained with neither competition nor linkage, as each bank continued to be awarded every dollar for which it bid [6].

By 1982, however, the program had grown substantially [7], so that

competition for funds had become a reality and the Treasurer did have the opportunity to put genuine linkage into the Massachusetts LDP by making linked deposit awards depend on bank lending performance. During the four semi-annual bidding cycles conducted in 1982 and 1983, award totals ranging from \$66.2 to \$78.5 million per cycle were awarded to an average of 63 banks per cycle. Although it remained the case that every bank submitting an eligible bid received a deposit of some size, total awards during this period amounted to less than half of total bids. After the November 1983 LDP awards were made, the state had \$114.2 million on deposit with 72 banks (in addition to \$66.2 million awarded in November, \$48.0 million of twelve-month deposits awarded in May were still outstanding); 15 additional banks had held LDP deposits between May and November.

Structure and Operation. [8]

The Massachusetts LDP has bidding cycles in May and November of each year. Approximately three weeks before bids are due, the Treasurer sends each bank in the state a current description of the program (the "Linked Deposit Program Supplement") and of the administrative details of the upcoming bidding cycle (the "Linked Deposit Program Guide"), together with an invitation to participate by using an enclosed form (the "Linked Deposit Bid Form") to bid for six-month and/or twelve-month term deposits. A bank that wishes to participate must specify the following, among other things, on its completed bid form: (1) the amount of deposit of each maturity that it seeks; (2) the interest rate that it bids for each deposit; (3) the amount of its total in-state deposits and total in-state loans; (4) the amounts of its loans to each of six particular categories of borrowers (small businesses,

students, tax-exempt organizations, community development corporations, mental health providers, and mortgage or home improvement borrowers in census tracts with average family income below 85% of the state average); (5) the amount of its holdings of investment instruments issued by public entities located in Massachusetts; (6) the annual dollar value of food stamps distributed; and (7) a signed "maintenance of effort" pledge that it will increase its loans in the specified areas by at least 70% of whatever amount it is awarded under the LDP. In addition, banks that previously received awards under the program must submit a completed "Maintenance of Effort Form." (All of the Treasurer's LDP materials mentioned in this paragraph are reproduced in an appendix to this report.)

Each bank is placed into one of three "leagues," and competes directly only with other banks in the same league. League I consists of commercial banks with total assets over \$200 million; the minimum acceptable interest rate bids for League I banks are the New York money market rates for large certificates of deposit of the same maturities, as published in the Wall Street Journal on the date by which bids must be postmarked. League II consists of all other commercial banks; their minimum acceptable interest rate bids are the League I rates minus three-quarters of a percentage point. Banks in League III, which consists of all thrift institutions (savings banks, co-operative banks, and savings & loan associations) must bid at least the League I rates minus one full percentage point.

The "linked deposit score" for each bid is computed according to the following formula, reproduced here from the Treasurer's "Linked Deposit Program Supplement":

$$.01 \times [(B + C)/A] = LDS + R = TOTAL$$

where: A = total in-state deposits in thousands of dollars,
B = total in-state loans in thousands of dollars,
C = total of the amounts noted in (4), (5), and (6), above, in thousands of dollars, with the summation being made after student loans, low-income housing loans, and food stamp sales are each multiplied by a factor of 5,
and R = interest rate bid, expressed as a decimal (e.g. 9.5% = 0.095).

Bid forms are reviewed and decisions on the distribution of deposit awards are made within the Treasurer's office. Bidding banks are notified of the results approximately one week after the bidding deadline, and deposits are electronically transferred to the successful banks on the following business day.

III. BIDS, SCORES, AND DEPOSITS: QUANTITATIVE ANALYSIS

To some extent, the design and operation of an LDP can be evaluated on the basis of a careful review of the documents describing the program, supplemented by interviews with those responsible for program administration. By itself, however, this is insufficient. Empirical analysis of the actual operation of the program is needed for at least three reasons: first, only empirical analysis can indicate how the program actually operates when its stated guidelines are incomplete or ambiguous. Second, it is an empirical question whether or not the program is operated in conformity with its stated guidelines. Third, the relative importance of the elements of a formula in discriminating among banks depends on the relative amounts of variation among banks in each of the categories of bank loans, which is an empirical matter.

For all of these reasons, the present study includes a detailed quantitative analysis of all LDP bids received and awards made during the May and November 1983 bidding cycles. This analysis, summarized in this part of the report, provides one significant input into the evaluation of the Massachusetts LDP's design and implementation that follows in Part IV.

The analysis is based on a data set compiled from information extracted from the originals of all linked deposit bid forms received by the Treasurer's office for the May and November 1983 bidding cycles, and from lists, prepared by the Treasurer's office, of all linked deposit awards made during 1982 and 1983 [9]. Sixteen pieces of information were recorded for each bidding bank, for each cycle: dollar amount bid, interest rate bid, and dollar amount awarded for each of the two deposit maturities; dollar amount of total in-state deposits and of total in-state loans; and the dollar amount of each of the eight specific categories of bank performance identified by the Massachusetts LDP.

For the first step of this analysis, League III (all thrift institutions) was broken into two sub-leagues of approximately equal size, thereby creating a total of four "Leagues." "League IIIM" consists of (mutual) savings banks, and "League IIIC" consists of cooperative banks and federal savings and loan associations (these are appropriately grouped together, because Massachusetts cooperative banks are, essentially, state-chartered savings and loan associations). This division of League III, which was carried out to make computation and data display more manageable, facilitates the investigation of possible systematic differences in the performance of the two types of thrift institutions. While it will sometimes be interesting to examine data for the two sub-leagues separately, Leagues IIIM and IIIC are artifacts of this study rather than of the Massachusetts

LDP itself; thus, every summary statistic reported for the sub-leagues will also be reported for League III as a whole.

On the basis of the data set described above, eight tables were calculated -- one for each of the four "leagues" for each of the two bidding cycles. One of these tables, that for League IIIM in the November 1983 bidding cycle, is included here, for illustrative purposes, as Table I; the other seven are included in the statistical appendix. Each table summarizes a great deal of information about the linked deposit score and total score, and their components, as well as about the dollar amounts bid and awarded -- not only for each bank, but also in terms of the minimum, average, and maximum values for all banks in each league. Because so many subsequent results are based on information included in these eight basic tables, some points of explanation and clarification are essential.

Each line displays information for an individual bank, identified in the table by a "bank code" assigned for this study (col. 1); the statistical appendix lists the codes and names of all participating banks. For each of the eight specific categories of bank performance taken into account by the LDP, the dollar amount reported by the bank has been divided by the bank's total in-state deposits (col. 2) and is expressed as a three-point decimal fraction (cols. 3-10) -- in three of the categories the banks weighted their actual dollar amounts by a factor of five before reporting them, as specified in the Treasurer's "Linked Deposit Bid Form." The total of these eight numbers is shown (in col. 11) as "Total 'C'" (the "C" can be thought of either as standing for categorical points or as corresponding to the notation of the Treasurer's formula) [10]. Total in-state loans, as a three-point decimal fraction of total in-state deposits, is shown next (col. 12). The sum of these two totals is reported (in col. 14) as "LDS points" (this

corresponds to the term "LDS" in the Treasurer's formula, although that formula's multiplicative term of .01 has been ignored in order to eliminate two unnecessary zeroes).

The Table's treatment of interest rate bids involves an additional modification of the Treasurer's formula, similarly designed to enhance clarity, without substantive impact on banks' relative scores. Because every bank must bid at least the required minimum interest rate, only the portion of the bid interest rate that is above this minimum can have any impact on a bank's relative score. Thus, what matters is the number of percentage points by which a bank's bid exceeds the required minimum; this is what is shown in column 13. (The heading "Max Ex i" stands for "maximum excess interest rate" [11].) Interest rates are shown as whole numbers plus three-point decimal fractions, again in order to avoid two unnecessary zeroes -- e.g, 1.25% would be written here as 1.250, as opposed to 0.0125 in the Treasurer's formula. When these "interest rate points" are added to "LDS points," the result is a bank's "Total Points" (col. 15), which corresponds to the "TOTAL" term in the Treasurer's formula, and which is the score to be used by the Treasurer in allocating awards among banks.

The final three columns of the table (cols. 17-19) show the total amount of deposits bid for and received by each bank [12], in thousands of dollars, as well as the amount awarded as a percentage of the amount bid. In addition to displaying each column's information for each individual bidding bank, the table also displays, in its bottom three rows, the average value for all bidding banks in the league as well as the minimum and maximum values for any single bank.

Three additional tables, constructed on the basis of the information in these eight basic tables, are helpful in presenting the results of our

quantitative analysis. Table II shows, for each of the three original leagues, and for the two sub-leagues of League III, the average value of each component involved in calculating the banks' linked deposit scores, as well as the minimum and maximum values and the range between these two extremes. The table reports on the November 1983 bidding cycle; an analogous table for May, included in the statistical appendix, does not differ in any significant way.

Tables III and IV present summary information, for May and November respectively, on the scores and awards of the best-scoring and worst-scoring banks in each of the three leagues. (In League I, only six banks submitted bids in May and eight in November, so all of these are included in the tables; for the other two Leagues, the five best- and worst-scoring banks are included.) For each bank included, the table shows its total point score, the deposit it was awarded (in thousands of dollars), and its award as a percentage of the amount it bid for. Summary statistics -- average score, average percentage of bid awarded, and total dollars awarded -- are shown for each group of banks in each league. Because they do differ substantially, tables for both May and November are included here. (Analogous tables, with League III replaced by its two sub-leagues, are included in the statistical appendix.)

TABLE I

DETAILS OF LDP SCORES AND AWARDS

NOVEMBER 1983 LEAGUE IIIM -- SAVINGS BANKS UNWEIGHTED TOTAL BASIS
(For bids & awards, totals = 12 month amount + 6 month amount)

Bank Code	Mass Depts (\$Mil)	Small Bus	Stud x5	Exemp Orgs	Inv Insts	CDC	Ment Hlth	Fd x5	St x5	Mort x5	Total "C" In-St	Max Ex i	LDS Pts	Total Pts	\$Bid Total	\$Awd Total	Awd/Bid-%	
M1	142	0.000	0.013	0.005	0.000	0.000	0.000	0.000	0.000	0.056	0.074	0.724	0.500	0.798	1.298	2000	500	25%
M3	147	0.002	0.077	0.002	0.000	0.000	0.000	0.000	0.000	0.152	0.232	0.562	0.500	0.795	1.295	1000	500	50%
M6	107	0.025	0.124	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.151	0.670	0	0.821	0.821	5000	500	10%
M7	53	0.103	0.000	0.001	0.000	0.000	0.000	0.012	0.019	0	0.135	0.733	0	0.868	0.868	1000	1000	100%
M8	147	0.000	0.106	0.005	0.000	0.000	0.000	0.000	0.643	0	0.754	0.594	0	1.348	1.348	1000	500	50%
M9	247	0.001	0.057	0.000	0.000	0.001	0.003	0.000	0.084	0	0.147	0.823	0	0.970	0.970	4000	4000	100%
M10	236	0.000	0.042	0.008	0.000	0.000	0.000	0.000	0.284	0	0.334	0.581	0	0.915	0.915	1000	1000	100%
M11	43	0.026	0.059	0.000	0.040	0.000	0.000	0.000	0.316	0	0.441	0.747	0	1.187	1.187	750	750	100%
M15	9	0.036	0.000	0.009	0.000	0.000	0.000	0.000	0.695	0	0.741	0.615	0	1.356	1.356	100	100	100%
M17	28	0.039	0.199	0.011	0.000	0.000	0.000	0.000	2.874	0	3.123	0.714	0	3.837	3.837	200	200	100%
M18	166	0.008	0.075	0.003	0.000	0.000	0.000	0.000	0.573	0	0.659	0.811	0	1.470	1.470	3000	1000	33%
M19	357	0.031	0.055	0.004	0.000	0.000	0.000	0.000	0.076	0	0.166	0.393	0	0.558	0.558	2000	2000	100%
M20	136	0.006	0.008	0.000	0.000	0.015	0.000	0.000	0.447	0	0.476	0.645	0.700	1.121	1.821	6000	3000	50%
M22	109	0.044	0.190	0.002	0.000	0.000	0.000	0.000	0.008	0	0.245	0.544	0	0.789	0.789	500	500	100%
M23	158	0.066	0.129	0.003	0.000	0.000	0.000	0.000	0.092	0	0.291	0.776	0.250	1.067	1.317	500	300	60%
AVE	137	0.026	0.076	0.004	0.003	0.001	0.000	0.001	0.421	0	0.531	0.662	0.130	1.193	1.323	1870	1057	72%
MIN	9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0	0.074	0.393	0	0.558	0.558	100	100	10%
MAX	357	0.103	0.199	0.011	0.040	0.015	0.003	0.012	2.874	0	3.123	0.823	0.700	3.837	3.837	6000	4000	100%
TOTAL BIDS AND AWARDS:															28050	15850	57%	

[For source and explanations, see accompanying text, esp. pp. 9 & 11]

TABLE II

SCORES BY LEAGUE AND BY PERFORMANCE CATEGORY: NOVEMBER 1983
 AVERAGE, MINIMUM, MAXIMUM, RANGE
 (Range = max - min)

Mass Depts (\$Mil)														LDS Total Pts	
		Small Bus	Stud x5	Exemp Orgs	Inv Insts	CDC	Ment Hlth	Fd St x5	Mort x5	Total "C" In-St	Ex i				
LEAGUE I	Ave.	272	0.248	0.067	0.003	0.049	0.002	0.002	0.016	0.075	0.461	0.671	0.000	1.132	1.132
	Min.	168	0.007	0.004	0.000	0.010	0.000	0.000	0.000	0.000	0.207	0.549	0.000	0.756	0.756
	Max.	461	0.449	0.173	0.014	0.140	0.013	0.006	0.068	0.199	0.702	0.756	0.000	1.458	1.458
	Range	293	0.442	0.169	0.014	0.130	0.013	0.006	0.068	0.199	0.495	0.207	0.000	0.702	0.702
LEAGUE II	Ave.	74	0.241	0.056	0.002	0.050	0.001	0.001	0.073	0.272	0.696	0.664	0.096	1.361	1.456
	Min.	7	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.189	0.361	0.000	0.587	0.837
	Max.	160	0.497	0.294	0.013	0.300	0.011	0.008	0.630	1.245	1.731	1.080	0.550	2.191	2.224
	Range	153	0.497	0.294	0.013	0.300	0.011	0.008	0.630	1.245	1.542	0.719	0.550	1.604	1.387
LEAGUE III	Ave.	137	0.026	0.076	0.004	0.003	0.001	0.000	0.001	0.421	0.531	0.662	0.130	1.193	1.323
	Min.	9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.074	0.393	0.000	0.558	0.558
	Max.	357	0.103	0.199	0.011	0.040	0.015	0.003	0.012	2.874	3.123	0.823	0.700	3.837	3.837
	Range	348	0.103	0.199	0.011	0.040	0.015	0.003	0.012	2.872	3.049	0.430	0.700	3.279	3.279
LEAGUE IV	Ave.	96	0.019	0.064	0.002	0.015	0.000	0.001	0.000	0.438	0.538	0.815	0.143	1.353	1.496
	Min.	4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.056	0.589	0.000	0.645	0.645
	Max.	294	0.073	0.234	0.008	0.180	0.001	0.014	0.000	2.480	2.495	1.118	1.250	3.433	3.433
	Range	290	0.073	0.234	0.008	0.180	0.001	0.014	0.000	2.480	2.439	0.529	1.250	2.788	2.788
LEAGUE V	Ave.	117	0.023	0.070	0.003	0.009	0.001	0.000	0.001	0.429	0.534	0.736	0.136	1.270	1.407
	Min.	4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.056	0.393	0.000	0.558	0.558
	Max.	357	0.103	0.234	0.011	0.180	0.015	0.014	0.012	2.874	3.123	1.118	1.250	3.837	3.837
	Range	353	0.103	0.234	0.011	0.180	0.015	0.014	0.012	2.874	3.067	0.725	1.250	3.279	3.279

[For source and explanations, see accompanying text, esp. pp. 9-12]

TABLE III

SCORES & AWARDS: SUMMARY RESULTS -- MAY 1983

SCORES: LDS SCORE + INTEREST RATE IN EXCESS OF MINIMUM REQUIRED BID
 AWARDS & BIDS: UNWEIGHTED TOTAL BASIS (12-mo amount + 6-mo amount)

LEAGUE I: BIG CBs					LEAGUE II: OTHER CBs					LEAGUE III: THRIFT INSTS							
Bank	Rank	Code	Score	Awd/ Bid%	\$Awd.	Bank	Rank	Code	Score	Awd/ Bid%	\$Awd	Bank	Rank	Code	Score	Awd/ Bid%	\$Awd
1	1	17	1.490	67%	2000	1	1	II21	2.437	43%	2300	1	1	C11	3.856	100%	400
2	2	15	1.361	77%	2700	2	2	II28	2.174	42%	2500	2	2	M17	3.668	100%	1000
3	3	18	1.320	65%	8500	3	3	I6	2.044	100%	2000	3	3	M9	3.160	25%	500
						4	4	II17	1.786	50%	1390	4	4	M13	2.951	50%	1000
						5	5	II11	1.748	90%	900	5	5	M20	2.842	29%	1000
TOP BANKS:																	
		Ave Score:		1.390				Ave Score:		2.038				Ave Score:		3.295	
		Ave Awd/Bid %:		70%				Ave Awd/Bid %:		65%				Ave Awd/Bid %:		61%	
		Total \$ Award:		13200				Total \$ Award:		9090				Total \$ Award:		3900	
4	I2	1.129	33%	1000		22	II9	1.101	40%	200		34	M7	0.863	100%	1000	
5	I4	1.064	50%	1000		23	II29	0.975	60%	1200		35	C4	0.836	15%	150	
6	I3	0.833	75%	3750		24	II16	0.935	100%	300		36	M6	0.811	10%	500	
						25	II32	0.775	67%	1000		37	M21	0.794	100%	3500	
						26	II3	0.739	50%	1000		38	M22	0.786	100%	1000	
BOTTOM BANKS:																	
		Ave Score:		1.009				Ave Score:		0.905				Ave Score:		0.818	
		Ave Awd/Bid %:		53%				Ave Awd/Bid %:		63%				Ave Awd/Bid %:		65%	
		Total \$ Award:		5750				Total \$ Award:		3700				Total \$ Award:		6150	
Banks w/ Bids:					6	Banks w/ Bids:					26	Banks w/ Awards:					38
Banks w/ Awards:					6	Banks w/ Awards:					25	Banks w/ Awards:					36

IV. EVALUATION

The purpose of the present section is not only to evaluate -- on the basis of documents, interviews, and the just-summarized quantitative analysis -- the current structure and operation of the Massachusetts LDP, but also to suggest potential improvements that might be implemented by the Treasurer.

At the heart of any linked deposit program are three formulas (which may be implicit or explicit): an eligibility formula used to determine whether and to what extent a bank can receive LDP deposits; a scoring formula used to summarize and rank a bank's performance according to specified criteria; and an allocation formula used to determine the award made to each bank, on the basis of its eligibility and its score as determined by the two previous formulas, plus any other factors deemed relevant by an LDP's architects. It is these three formulas, acting together, that establish the LDP's link between bank performance and LDP deposits.

These three formulas provide the principal organizing device for the following pages: there are sections on eligibility, scoring, and allocation. The very next section, however, considers the division of banks into "leagues," and a final section examines how well the Massachusetts LDP has been publicized -- two issues that affect the impact of all three formulas.

Leagues.

The state's banks were originally divided into leagues so that competition for funds would take place among banks similar enough in nature that it would make sense to evaluate their relative performance using a common formula. Given legal restrictions and other institutional factors, it

would hardly be reasonable to reward a commercial bank relative to a thrift institution because it devoted a larger portion of its portfolio to small business loans -- nor to punish it for making relatively fewer loans for low- and moderate-income housing. Thus, one distinction recognized by the division into leagues was that between commercial banks (CBs) and thrift institutions (thrifts) -- between Leagues I and II on the one hand, and League III on the other. Table II shows the validity of this distinction: the average ratio of small business loans to in-state deposits was roughly ten times greater in Leagues I and II than in League III (0.248 & 0.241 vs. 0.026); while the ratio for low-income housing loans was substantially lower.

The division of CBs into Leagues I and II was intended to recognize another qualitative distinction -- that between "money center" banks and more locally-oriented ones. This distinction was never as clear-cut conceptually as that between CBs and thrifts, although there was general agreement that the structure and behavior of Boston's four biggest banks did differ in significant ways from the state's other, smaller CBs. Thus, the idea of placing these four banks into a separate league was indeed a reasonable one [13]. But the use of an unchanging quantitative criterion -- a bank is placed in League I if its total assets exceed \$200 million -- to implement the underlying qualitative distinction has not worked as intended. During 1983, none of the state's four "money center" banks participated in the LDP. Eight banks did bid for and receive linked deposit awards in League I, but none were money center banks -- their classification as League I banks was the result of maintaining the same dollar cut-off point in spite of inflation and economic growth [14]. If the cut-off line had been re-established in accordance with the basic intention of the LDP's designers, so that only

money-center banks were included in League I -- and there is no apparent reason why it shouldn't have been -- there would have been no League I participants in 1983. One immediate consequence of this observation is clear: this study's quantitative analysis can provide no basis for a comparative examination of the performance of money-center and non-money-center banks in terms of the criteria incorporated in the linked deposit scoring formula.

In short, of the two qualitative distinctions underlying the present league structure, that between commercial banks and thrifts appears justified by the available data, while that between money-center and other CBs has been implemented in a manner inconsistent with its underlying rationale -- all of the 1983 CB participants in the Massachusetts LDP should have been grouped into the same league.

A more complex league structure could incorporate additional divisions along any or all of the following three lines: first, thrift institutions could be divided so that savings banks would form one league and co-operative banks and savings & loan associations another. Second, banks could be restricted to competing with other banks of roughly equal size. Third, geographical areas could be used as a basis for grouping -- e.g., a league of Western Massachusetts thrifts, or of CBs from southeastern Massachusetts and Cape Cod [15]. Although a detailed review of these possibilities is beyond the scope of this study, there are reasons to believe that a more complete study would conclude that the creation of additional leagues is unwarranted. First, the similarity of the data for "League IIIM" and "League IIIC" in Table II suggests that there is no strong basis for subdividing the thrifts by type of institution. Second, if it were to be determined that there are strong public policy grounds for wishing to take bank size and/or location into account in the distribution of LDP awards, this might be more simply,

flexibly, and effectively pursued through appropriate modification of the scoring and/or allocation formulas, rather than by redefining "leagues."

Eligibility.

In order to be eligible for receipt of a Massachusetts LDP award, a bank must satisfy a number of requirements, three of which merit individual discussion. First, it must have statutory authorization to receive a public deposit of the amount in question. This is really a two-part requirement. Part one is that the bank belong to a class of institutions authorized to be depositories for state funds. This is not automatic -- credit unions have not been so authorized, and in mid-1983 those state-chartered savings banks that changed their charters to become federal savings banks (FSBs) lost this authorization. Part two is that the deposit awarded under the LDP not result in the total dollar amount of a bank's state deposits exceeding the maximum permissible amount determined by statute (or by the Treasurer's own investment policy guidelines, which are sometimes more restrictive). The specification of this maximum varies by class of institution: for CBs it is 55% of capital, surplus, and undivided profits (up to 85% if the excess over 55% is collateralized); for savings banks it is 5% of total deposits; for cooperative banks it is 1.5% of total deposits; and for federal savings and loan associations it is the maximum amount covered by federal deposit insurance, currently \$100,000.

Although an evaluation either of the content of these statutory and policy limits or of their apparently arbitrary variation among types of depository institutions is beyond the scope of this study, it is appropriate to observe critically that the linked deposit bid form itself requires banks neither to furnish the data nor to perform the calculations necessary to

demonstrate that they are eligible for deposits of the size they are bidding for. It would be desirable to redesign the linked deposit bid form so that each bank was required to show explicitly each step in calculating the maximum linked deposit award for which it would be eligible (first, the statutory maximum would be calculated, if necessary; then all existing state deposits -- excluding expiring linked deposit awards -- would be subtracted from this amount; the difference obtained in this way would be the bank's maximum permissible linked deposit bid in the current bidding cycle; this amount could then be readily compared to the amount being bid for). Such a redesigned form could ease bank compliance with, and Treasurer administration of, this first eligibility requirement.

The second eligibility requirement is that a bank must bid at least the required minimum interest rate, as determined by the money market rate for large certificates of deposit of like maturity quoted in the Wall Street Journal on the last possible day for postmarking bids. League I banks must bid at least the quoted rates, League II banks must bid rates no more than 75 basis points (three-quarters of a percentage point) below the quoted rates, and League III banks must bid rates no more than 100 basis points (one percentage point) below the quoted rates. There may be good reasons for requiring a higher minimum interest rate from money center banks, but there is no apparent public policy rationale for having relatively large non-money center commercial banks pay 75 basis points more than smaller CBs. (Although this issue would disappear with an appropriate redrawing of the cut-off line between Leagues I and II that isolated money center banks in League I, it will persist if that cut-off line remains unchanged). Nor is it clear what public policy consideration supports CBs being required to pay more than thrifts; the two types of banks do not compete directly for LDP funds, so the

effect is simply to give thrifts a relatively greater financial incentive to participate in the program.

The third eligibility requirement, applied to banks that have previously received an LDP award, involves meeting a "maintenance of effort" standard. Each bidding bank must sign a statement on the bid form that reads, in part:

As a condition of award the Bank agrees to maintain its present loan efforts in the areas listed in component C on the bid form. The bank further agrees to increase its loans in those areas by an amount equal to at least 70% of the amount of the total award made to the Bank under this program.

Two or three weeks prior to the bidding deadline, moreover, the bank must have completed a form showing the dollar amounts in each categorical area as of the close of the preceding quarter; for example, to be eligible for an award in the May 1983 bidding cycle, a bank was required to use data as of March 31, 1983 on the maintenance of effort form due in early May.

The maintenance of effort form itself does not provide a precise formula that would enable the bank to display the calculation of the new minimum total dollar amount in the eight designated categories (its total "C") that would be necessary to meet the maintenance of effort standard. Rather, the necessary calculations must be performed in the Treasurer's office on the basis of the information supplied on the bank's maintenance of effort form plus information retained from the previous maintenance of effort form(s) and/or the previous linked deposit bid form(s) from the same bank. The present study did not include an empirical assessment of how accurately or rigorously the maintenance of effort requirement is in fact being enforced. According to the Treasurer's office, the maintenance of effort requirement is taken seriously, but banks that fail to meet the requirement are not automatically ruled ineligible for deposits in the current bidding cycle; rather, they are called, asked if they have good reasons for not being in

compliance, and warned that they must be back in compliance by the following bidding cycle. There have been numerous such warnings, but apparently no bank has ever been ruled to be ineligible for failing to meet the maintenance of effort standard [16].

The absence of a precise formula for specifying the meaning of the maintenance of effort standard quoted above is troublesome, because the standard as stated is subject to multiple possible interpretations. Among the questions it leaves unanswered are these: do its two sentences imply two different standards -- that effort will be maintained in every single category, while the 70% requirement applies to the total of all categories -- or is there only a single standard, stated in the second sentence? Does the requirement apply only to the loan categories or to the two non-loan categories as well? Is maintenance of effort taken to mean maintenance of at least the same ratio of loans to in-state deposits or maintenance of at least the same dollar amount of loans? Is the base period for measuring compliance with the standard taken to be the previous bidding cycle, or is it taken to be the bidding cycle when the bank was first awarded LDP funds [17]? In addition, the LDP's written description provides no guidance on the question of when and how a bank that fails to meet the maintenance of effort criterion in one bidding cycle can regain its eligibility for future participation in the program.

The existence of so ambiguous a standard seems bound to cause problems of administration and enforcement. If a maintenance of effort requirement is to be maintained, it would be much more efficient and mutually informative, as well as less burdensome to the Treasurer's office, to include a maintenance of effort section as part of the linked deposit bid form itself, rather than to continue to require a separate form, due on a different date.

This section could provide a step-by-step guide for the bank to fill in the required information and to do the necessary calculation to compute both its current "C" total and its required minimum "C" total; this would remove ambiguity, eliminate a whole set of forms, and reduce the administrative burden on the Treasurer's staff.

A more basic question is whether there should be any maintenance of effort eligibility requirement at all. The requirement has a clear common-sense rationale -- that the funds provided to banks under the program should be used by the banks to increase their lending in the categories targeted by the program. But the actual functioning of banks makes it difficult to devise an operational formula that is both reasonable (so that it would be fair to take away the eligibility of banks that fail to meet it), and meaningful (so that it would impose a non-trivial standard for bank performance). There is seldom a direct relationship between particular deposits and particular loans, so there is no real way to ascertain what particular use was made of the particular funds received under the LDP program. Growth in total "C" is likely to be determined primarily by growth in the dollar volume of lending, including the effects of inflation, rather than by the use of a particular deposit; thus the criterion could be satisfied even by a bank that immediately reinvests its LDP award in the New York money market to take advantage of the spread between the rate that it can earn there and the rate that it must pay for its linked deposit award (this is what the treasurer of one large savings bank said that he probably would do). On the other hand, loan totals can periodically fluctuate downwards even for banks that are making a genuine effort to expand lending in the designated areas; for example, a bank's amount of outstanding housing loans falls when a set of existing loans is sold to a packager of

mortgage-backed securities, precisely in order to obtain the funds necessary for the bank to be able to undertake additional lending.

To see another problem with the maintenance of effort requirement, consider a bank that has participated in the LDP for several years, with a constant linked deposit award of \$100,000. It would not be reasonable to say that "C" should rise by \$70,000 before the next bidding cycle, when the deposit is merely being rolled over; on the other hand, to require only that "C" be \$70,000 greater than when the bank first entered the program several years before is to set a standard so loose as to be almost meaningless. Faced with a choice between these two alternatives, the latter interpretation (that actually adopted by the Treasurer's office) is clearly preferable. But it may be more reasonable still to abandon the maintenance of effort requirement and to rely on the LDP's scoring formula for evaluating bank performance. If that part of the LDP is working well, and if the program is truly competitive, a bank that fails to maintain its effort would find that it was unable to compete successfully for funds. In short, because of the practical and theoretical obstacles to designing a meaningful maintenance of effort requirement, it may make most sense simply to eliminate this third eligibility requirement altogether.

Three additional eligibility criteria may be noted here, without evaluation, for the sake of completeness. One noted on the linked deposit bid form itself is that a bank will be ineligible to participate in the LDP if "it is reported to the Treasurer's Office by the Commissioner of Banking that the Bank has been convicted of any discriminatory offence in the past three years" [18]. Another, applied informally and nowhere explicitly stated, but nevertheless a very real eligibility criterion, is that the Treasurer's office have no serious question about the safety of the state's deposits in

terms of a potential bank failure. Finally, of course, the bank must submit a correctly completed bid form by the stated deadline.

Scoring.

To increase clarity, this study examines the Treasurer's linked deposit scoring formula (p. 8, above) in an equivalent, restated form, as explained previously (pp. 9-12, above). The restated formula, like the original one, consists of three major parts: (1) "C points" for the dollar volume, as a share of the bank's total Massachusetts deposits, of bank activity in eight specified categories; (2) "in-state points" for total in-state lending relative to total Massachusetts deposits; and (3) "interest rate points" for the interest rate bid. That is,

$$\text{Total Points} = \text{C Points} + \text{In-state Points} + \text{Interest Rate Points.}$$

Total Variation. The data displayed in Tables I - IV indicate that the scoring formula does indeed discriminate among banks. In November 1983, total scores ranged from a low of 0.558 to a high of 3.837 (both in league III). In both May and November, the average score of the top five banks in League II was more than twice as high as the average score of the bottom five banks, while the average score of the top five banks in League III was more than four times as large as their five lowest-scoring competitors. Thus the scoring formula is successful in avoiding one potential problem -- that of giving all bidding banks very similar scores. Furthermore, the analysis in the following subsection shows that all of the major components in the scoring formula, as well as a majority of the categories contributing "C points," made substantial contributions to the total variation of the scores awarded to individual banks.

Relative Importance of Components. The significance of any given component in determining the ranking of banks and the relative differences in their scores depends not on the absolute number of points provided by the component, but in its variation. (This is the principle that made it possible to remove the minimum required interest rate from the formula; because it is the same for every bank within a league, subtracting it from every bank's score has no substantive effect, even though the points provided by this term alone account for more than 80% of the total points received by most banks under the Treasurer's scoring formula.)

One indicator of the variation of each of the formula's components is provided by the difference between its maximum and minimum values, defined here as that component's "range." An examination of the "range" lines in Table II reveals three clear conclusions: first, each of the three major components does vary significantly by this measure (a single exception results from the fact that no League I bank bid more than the required minimum interest rate). Second, in each league the variation in "C points" is greater than the total of the variations in the other two types of points combined. Third, the amount of variation of the eight individual components of "C" is highly unequal [19].

A more detailed examination of the individual categories contributing to total "C points" shows which ones have the greatest and which ones have the least relative importance. On the one hand, the great bulk of the variation in "C points" for Leagues II and III is accounted for by the low-income housing component (the range of this component alone is 1.245 and 2.874, in the two leagues respectively, while the range of total "C points" is 1.542 and 3.067). On the other hand, three of the components -- loans to exempt organizations, to community development corporations, and to mental health

providers -- account for almost no variation (the maximum range for any one of these three in any league is .015; more detailed examination of the underlying data contained in the statistical appendix shows that the sum of the points from these three categories of loans varies by no more than .022 in any league). Between these extremes, the components of small business lending, student lending, and investments in obligations of Massachusetts public entities each vary by a significant extent in all three leagues, low-income housing loans in League I have a similar amount of variation, and the food stamp sales component shows a large range in League II.

"Range," which depends only on minimum and maximum values, is a crude measure of the amount of variation. And because the range of a total is not necessarily equal to the total of the ranges of its components (e.g., in League III, the range of total scores is 3.279 while the ranges for interest rate points, in-state points, and C points are 1.250, 0.725, and 3.067, respectively), there is no simple way to describe the proportion of variation in a total that is accounted for by the variation of each of its components. For present purposes, however, the analysis just summarized may be adequate; in the context provided by the rest of this study, there would appear to be small potential payoff from undertaking a more sophisticated quantitative analysis of the relative importance of the multiple components of the Massachusetts LDP scoring formula [20].

By any measure, the relative importance of a component is affected by the "weight" that it is given in the formula as well as by the numerical value of the underlying data. In the Treasurer's present scoring formula, a weight of 5.0 is given to three of the individual categories that contribute "C points." Because the dollar amounts of student loans, of food stamp sales, and of low-income housing loans are each multiplied by five before

being included in the calculation of the formula (the linked deposit bid form requests only the post-multiplication amount), each dollar in either of the two lending categories counts three times as much as a loan in any of the other specified lending categories, and a dollar of food stamp sales counts two and one-half times as much. (Why not five times as much? Because each dollar loaned in any of the categories also counts toward in-state points, the correct comparison is between 6 and 2 -- or, in the case of food stamps, 5 and 2 -- rather than between 5 and 1.) This weighting clearly did make a difference in the relative importance of the three components so weighted, although in the case of food stamp sales even the weighted amount was substantial in only one of the three leagues.

Accuracy. The most fundamental questions about the scoring formula remain to be asked, however: Does it produce scores that really reflect bank performance? Is it able to discriminate accurately among banks according to their relative contributions to the welfare of Massachusetts residents and communities? Does it provide an operational measure of the extent to which banks are channeling capital into areas where it is particularly needed? In sum, does it offer an effective means of identifying which banks are particularly worthy of being awarded public deposits?

There does not exist any independent, generally accepted measure or ranking of bank performance against which LDP scores could be checked for accuracy (if there were such a measure, of course, then LDP scores would be unnecessary). The closest thing to this is provided by the implementation of the Community Reinvestment Act (CRA), which has established criteria of responsiveness to the needs of the geographical community within which a bank is located. However, these criteria are not used to periodically calculate a numerical score or a rank for every bank; instead, they are applied only in

certain circumstances (e.g., when a bank seeks approval for a merger or for opening a new branch), in which case the judgment reached is essentially binary -- either a bank's performance is judged good enough to justify approval of its application, or it isn't.

Those involved in the CRA process have, however, inevitably reached informed individual and collective conclusions about the relative responsiveness of individual banks to community needs. Although a systematic investigation of the relationship between the ranking of banks in the minds of participants in the CRA process and the ranking produced by the LDP scoring formula would be well beyond the scope of the present project, it can be reported that a small number of informal discussions on this issue left the distinct impression that there is little, if any, correlation between the two rankings. Although this impression, even if correct, does not necessarily imply that the LDP scoring formula is an inaccurate indicator of a bank's overall contributions to the economic and social welfare of the Commonwealth, it at least raises questions concerning the reasons for the apparently divergent evaluations.

An alternative way to address the question of the effectiveness of the LDP scoring formula is to focus attention directly on the components and structure of the formula itself. When this is done, one's first conclusion is likely to be that it is a crude instrument for measuring something that is in fact quite complex. Reflection on possible modifications of the formula is then likely to lead to a second conclusion -- that this crudeness is less the result of particular flaws in the present formula than it is an unavoidable feature of any attempt to evaluate a highly diverse set of banking institutions by means of a single quantitative formula. Should banks be evaluated on the basis of what they are doing now -- or on the basis of

the direction in which they are moving? Should a bank's loan portfolio be assessed against an statewide standard -- or against a standard that takes into account its own particular location? Should banks be given credit for making types of loans that are, from some public interest perspective, inherently worthy -- or for making loans that increase the flow of funds into areas experiencing some kind of capital shortage? Should some types of loans be weighted more heavily than other types of loans -- and, if so, what should determine the assignment of weights? Although there are no clearly best answers to such questions, any LDP scoring formula must necessarily come down on a single side of each of these issues.

Some specific features of the present scoring formula can be identified as raising high-priority questions to be addressed in any effort aimed at revising the formula presently used by the Massachusetts LDP. First, should the present weights be modified? The great relative importance of low-income housing loans in accounting for the overall variation in scores is heightened by its heavy weighting; the tiny relative importance of the three narrow categories of loans to CDCs, tax-exempt organizations, and mental health providers suggests that only if such loans are given a very heavy weighting does it make sense to maintain them in the formula at all; and the rationale for extra weighting on student loans and food stamp distribution is not clear.

Second, is the volume of food stamp distribution a good measure of a bank's overall provision of services (as opposed to just loans) to the community? (This was the rationale that led to the seemingly anomalous inclusion of this non-loan category in the scoring formula.) If so, there is a good case for retaining it in the formula; if not, is there some better measure of this aspect of bank performance?

Third, is it appropriate to include interest rate points in the scoring formula, rather than simply to require that each participating bank pay a uniform rate, established by the Treasurer? The excess interest rate bids do provide additional revenue for the Treasury, but they can have the effect in some cases of dramatically raising a bank's relative score, and thereby potentially diverting deposits away from other banks whose lending (and service) performance is superior. In November 1983, for example, the top scoring bank in League II would have had only the fifth best score if interest rate points were not included, and another bank raised its rank from eighth to third. At the same time, there were even more dramatic effects in League III: interest rate points enabled one bank to rank second rather than twelfth and another to rank third rather than sixteenth.

Because there is no clear objective standard for its evaluation, any overall assessment of the Massachusetts LDP's scoring formula -- favorable or critical -- must necessarily be somewhat subjective. This study's quantitative analysis showed that the formula does indeed effectively discriminate among banks, in the sense of producing scores that vary considerably from bank to bank. But its more qualitative analysis of the formula's "accuracy" suggests a lack of good grounds for being confident that the fundamental questions asked in the first paragraph of this subsection can be answered affirmatively.

Allocation.

The most straightforward system of allocation for an LDP is what can be called the "strict auction" system, commonly used in financial markets: once any ineligible bids are eliminated, the highest scoring bidder receives the

full amount bid for, then the next highest scorer receives its full bid, and so on until the amount of the good being auctioned, generally specified in advance, is exhausted. But more complicated allocation formulas can also be employed. For example, an allocation formula could impose constraints that would result in some bidders receiving less than they would under the strict auction system (e.g., that no more than a specified percentage of the total awards go to a single bidder, or that there be upper and lower limits on the percentage of total awards going to bidders in specified geographical regions). Another possibility is that an allocation formula could use weights to adjust the scores of bidders in specified categories -- e.g., minority bidders, or bidders from a specific geographical area, could be given weights greater than one, or smaller bidders could be favored by assigning weights inversely related to, say, bank size. Alternatively, scores could be used to place bidders into groups, with all bidders qualifying for the same group receiving the same award; the simplest instance of this is to divide the auctioned good equally among all bidders who score above a specific required minimum.

Whatever factors are taken into account in the allocation of awards, however, fundamental principles of public administration dictate that an LDP should have clearly stated criteria and procedures that determine the allocation of awards (once ineligible bids have been eliminated) on the basis of individual bank scores, plus whatever other data (e.g., bank size) are needed as inputs into the allocation formula. In other words, the system of allocating awards should be as objective and automatic as possible [21].

The Massachusetts LDP is seriously deficient in the way that it allocates awards. First, neither the total amount to be awarded in any given bidding cycle, nor the division of the total among the three leagues, is

announced in advance of the awards themselves. Second, the "method of allocation" stated in the Treasurer's "Linked Deposit Program Supplement" --

Awards will be made through a process of mathematical proration between the funds available for deposit and Linked Deposit Scores. The deposits will be awarded at the rates bid, starting with the highest scoring bidder in each league and moving down. The Treasurer reserves the right to reject any or all bids in whole or part.

-- cannot be clearly and unambiguously translated into an quantitative, operational allocation formula (although it strongly suggests that a method quite akin to the strict auction method will be employed). In fact, according to the Treasurer's office, awards are actually determined not by application of any formula, but by a committee that takes into account a number of factors, including scores and maintenance of effort.

By themselves, these procedural defects in the allocation procedures of the Massachusetts LDP, while worth rectifying, do not necessarily have major substantive impact on the allocation of awards. Another deficiency in the Massachusetts LDP's allocation of awards is, however, clearly of major significance -- indeed, it is the single most striking and significant finding of the present study: The actual allocation of linked deposit awards among banks is virtually unrelated to the scores awarded to banks by the Treasurer's own scoring formula.

The quantitative analysis undertaken for the present study produced results that are clearly sufficient to support this finding. The most compelling of these results are summarized in Tables III and IV (pp. 15-16, above), which show the scores and awards for both the highest-scoring and lowest-scoring banks in all three leagues in both of the 1983 bidding cycles. One would expect that the high-scoring banks would have received awards that were equal to a high percentage (perhaps even 100%) of their

bids, and that low-scoring banks would have received awards that were equal to a small percentage (perhaps even 0%) of their bids. Similarly, one would expect that the total dollar value of the awards to high-scoring banks would be very much greater than the total dollar value of the awards to low-scoring banks. The results for League I show differences between the higher-scoring and lower-scoring banks that are substantially less than might have been expected. More importantly, in the results for Leagues II and III, which contain most of the participating banks, which accounted for 73% of the LDP awards in 1983, and where the number of banks is sufficient to produce large gaps between the scores of high-scoring and low-scoring banks, the expected relationships between scores and awards are altogether absent. In two of four cases -- League III in May and League II in November -- the five lowest-scoring banks received a larger average percentage of the amounts that they bid for than did their highest-scoring counterparts. In both bidding cycles, the five highest-scoring banks in League III were awarded a smaller total dollar amount than their lowest-scoring counterparts. And an examination of the data for the individual banks that are included in these tables, as opposed to just the group averages, reveals no clear patterns.

To further examine whether and to what extent the awards to individual banks are related to their linked deposit scores, two sets of correlation coefficients were calculated. An advantage of correlation coefficients over the results shown in Tables III and IV is that the former measure takes into account all banks in each League, not just those with the highest or lowest scores.

First, for each league and for each of 1983's two bidding cycles, the standard correlation coefficient between the scores of banks and their awards as a percentage of bids was computed. (These scores and percentages are

shown in columns 15 and 18 of Table I, and of its seven counterparts in the statistical appendix.) The results are shown in the next to last column of Table V. In five of the six cases, the correlation coefficient is low (less than 0.16), but positive; in the sixth case (League II in November), the correlation coefficient has a substantially higher absolute value, but has a negative sign (-0.397). (Only the negative coefficient is significantly different from zero at the 5% significance level.) The precise interpretation of these numerical values is unclear, because the correlation coefficient is a measure of the closeness to an exact linear relationship between two variables, and there is no reason to hold that up as a standard in the present instance [22].

Second, correlation coefficients were calculated between each bank's rank in terms of its score and its rank in terms of its bid/award percentage, again for each league and each of 1983's two bidding cycles. The results of these calculations are shown in the right hand column of Table V. Again, five of the six coefficients are low positive numbers that are not significant at the 5% significance, while the sixth coefficient (again for League II in November) is again much larger in absolute value, negative in sign, and significant at the 5% level.

The calculation of these correlation coefficients offers additional support for the conclusion that the Massachusetts Linked Deposit Program fails to actually link deposits to bank performance, even as imperfectly measured by its own scoring formula.

What does, in fact, determine the allocation of awards? No systematic quantitative investigation of this question has been undertaken, but simple inspection of the data suggests two principles at work, and the Treasurer's office has confirmed their use: first, every bidding bank is given at least

TABLE V
CORRELATIONS BETWEEN TOTAL POINT SCORES OF
INDIVIDUAL BANKS AND AWARD/BID PERCENTAGES

MAY 1983 AND NOVEMBER 1983

League	Month	Number of Banks	score-% r [*]	rank-rank r [+]
I	May	6	0.157	0.257
	Nov	8	0.129	0.311
II	May	25	0.025	0.081
	Nov	23	-0.397(#)	-0.385(#)
III	May	36	0.090	0.002
	Nov	29	0.139	0.159

[*] "score-% r" is the correlation coefficient between the actual linked deposit scores of individual banks and their linked deposit awards as a percentage of the amount that they bid for.

[+] "rank-rank r" is the correlation coefficient between the ranks of the linked deposit scores of individual banks and the ranks of their award/bid percentages. That is, the highest score (or percentage) is assigned a rank of "1," the next highest is given rank "2," etc. In the case of ties, banks were assigned a common rank -- e.g., three banks tied for ranks 4, 5, and 6 would each be assigned the rank "5."

[#] indicates significantly different from zero at the 5% significance level.

For sources and additional explanation see accompanying text.

something, no matter how low its score; second, there is a general understanding that the total amount that a bank holds under the LDP will remain roughly constant, if the bank wishes to maintain it. In other words, the Treasurer's office attaches considerable importance to providing LDP funds to as many interested banks as possible, and to providing continuity and predictability for those banks that do participate in the program.

Publicity.

The third part of the "well-well-well" standard enunciated by the Special Commission on State Investment was that the Massachusetts LDP be "well-publicized." The Commission believed that three types of benefits could result from a high level of publicity: increased likelihood of exposing any false reporting or other misbehavior by any of the parties involved in the program; increased public interest and involvement in the on-going task of monitoring and improving the program's design and implementation; and, most importantly, multiplied impact of the LDP itself. Two related processes were seen as contributing to this last effect: on the one hand, banks' general desire to obtain favorable publicity (and to avoid unfavorable publicity) would lead them to alter their lending patterns in ways that would result in higher LDP scores and rankings; on the other hand, the actual dollar inflow of deposits to high-scoring banks could greatly exceed the amount of direct LDP awards if other public-spirited depositors (e.g., other government entities, churches, foundations, unions, fraternal organizations, individuals) responded to the publicized results of the linked deposit competition in allocating their own deposits among banks. [SCSI 1977, pp. 2, 9; Campen 1977, p. 24.]

In fact, the Massachusetts LDP has not been well-publicized. While the

Treasurer's office has shown considerable public relations skills in publicizing its lottery programs and its lists of persons entitled to unclaimed money, it has operated its linked deposit program with an extremely low profile. A number of the people contacted in the course of the present study, individuals who are generally well-informed about the state's economic and social policies, expressed surprise when they were told that Massachusetts has a linked deposit program currently in operation. The semi-annual distribution of linked deposit awards is not publicized through the media, in spite of the obvious possibilities for interesting stories (e.g., "One can imagine an aggressive treasurer personally visiting and congratulating high-scoring bank presidents, making sure the press was on hand" [Kittredge 1979, p. 7]). Individual banks are informed only of the results of their own bids; they do not routinely receive a listing of the bids, scores, and awards of all participating banks. Indeed, the present study found no evidence of the existence of any such lists -- information about bids and scores was seen only on the linked deposit bid forms of individual banks; and information about awards was seen only on internal lists of all banks receiving awards during a bidding cycle, lists that contained no information about bids or scores. It appears that even if a concerned citizen, or an enterprising reporter, were to ask the Treasurer's office for information about the relative performance of the state's banks as indicated by their linked deposit scores, there would be nothing readily available.

It should be noted that the apparent lack of such readily available information is related not only to the ability of the Treasurer's office adequately to publicize the LDP, but also to its ability to manage the program effectively. The computations necessary to process the raw numbers

submitted by banks on their linked deposit bid forms and maintenance of effort forms appear to be carried out and recorded by hand. The implementation of even a simple computerized data processing system for the Massachusetts LDP could have considerable benefits in terms of calculating scores quickly and accurately, allocating awards in accordance with specified criteria, producing lists, tables, and charts useful both for external reporting and internal program management, and maintaining records.

V. CONCLUSIONS

Two principal conclusions follow from this study's systematic evaluation of the design and implementation of the Massachusetts LDP. First, there is in fact no linkage in the Massachusetts linked deposit program as it is currently operated; deposits are allocated among banks independently of the banks' linked deposit scores as determined by the Treasurer's own scoring formula. In other words, the program is operating as a "keep-the-money-at-home" program that deposits state funds in Massachusetts banks (rather than investing them in national money market instruments) but that does not link the awarding of these public deposits to bank performance in promoting designated economic and social public policy objectives. Second, and more generally, the Massachusetts LDP falls far short of being "well-designed, well-implemented, and well-publicized" -- that is, it fails to meet the three-part criterion originally set forth by the Special Commission on State Investment [1977, p. 2]. The evaluation presented in Part IV, above, identified serious deficiencies in every aspect of the program that was reviewed.

These conclusions suggest the need for substantial reforms in the Massachusetts LDP. Among the most important of these are: reestablishing an

appropriate cut-off point for dividing commercial banks into two leagues; either establishing an explicit, reasonable, and enforceable maintenance of effort requirement, or else eliminating the maintenance of effort requirement altogether; revising the scoring formula so that it more accurately reflects bank performance; developing an explicit formula for allocating awards among banks on the basis of their scores and other specified criteria; developing appropriate means for publicizing the program's operation and its results; creating forms and instructions that are clearer for participants and more informative for program managers; and improving data processing and reporting within the Treasurer's office.

Although the critical findings presented in Part IV were frequently accompanied by constructive suggestions for improving the design and operation of the Massachusetts LDP, it would be well beyond the scope of the present study to provide a comprehensive and detailed set of recommendations for reform. Putting together any such package of proposed reforms would involve making a large number of interrelated judgments on matters of fact, on policy issues, and on administrative feasibility. If the Treasurer is interested in undertaking substantial reform of the LDP, an initial step might be the creation of a small advisory group -- perhaps consisting of bankers who have participated in the program, public sector staffers concerned with the financing of balanced economic development, and representatives of advocacy groups concerned with the distributional issues that the LDP was intended to address, as well as members of the Treasurer's own staff -- charged with recommending a specific set of changes in the Massachusetts LDP.

If Massachusetts is to continue to have a linked deposit program, it should be as vigorous, visible, efficient, and effective -- that is, as

"well-designed, well-implemented, and well-publicized" -- as possible. At its core must be a strong, clear, and sensible link between the allocation of public deposits and the performance of private banking institutions [23].

NOTES

1. An earlier version of this paper was presented at the Northeast Business and Economic Association Conference, Boston, November 9, 1984. Research was begun as a member of the Faculty Research Seminar of the McCormack Institute of Public Affairs at the University of Massachusetts/Boston; the support of that Institute, and of its Director, Ed Beard, is gratefully acknowledged. Thanks are also due to the Massachusetts Treasurer's Office, particularly to Deputy Treasurer Patrick D. Sullivan, for cooperation and assistance, and for reviewing the final draft during December 1984 for possible errors and omissions.
2. In this paper, the term "banks" is used to refer to depository institutions in general, including commercial banks, savings banks, cooperative banks, and savings and loan associations.
3. By 1983, the total size of the state's General Fund had grown to about \$500 million. The 72 banks holding linked deposits awards consisted of 34 of the state's approximately 135 commercial banks (about 25%), 21 of the approximately 150 savings banks (about 14%), 14 of the approximately 105 cooperative banks (about 13%) and 3 of the approximately 27 federal savings and loan associations (about 11%). The statistical appendix includes a listing of all banks that received linked deposit awards during 1982 and 1983.
4. In fact, there seems never to have been a written evaluation of the LDP of any state, with the single exception of a 1969 study of one aspect of the first year of the Illinois LDP.
5. It is possible that some linkage between LDP awards and bank performance could result from self-selection by banks. If banks choose whether or not to bid for linked deposit funds on the basis of their own perception of how their lending performance would be evaluated by the linked deposit scoring formula, and if these perceptions are accurate, then the program would create a sort of "linkage" between bank performance and the deposit of state funds. There is, however, no evidence that this has actually happened.
6. "Eligible" bids here refers to bids meeting the deadline, completing the forms correctly, bidding at least the minimum required interest rate, etc.; confusion over such matters resulted in almost half the bids submitted in the first two bidding cycles being declared ineligible, but by April 1979 this seems no longer to have been a significant problem.
7. According to the Treasurer's office, no data on bids and/or awards at even the aggregate level have been retained for the period before 1982 (the data in the preceding paragraph is from another source that obtained information from the Treasurer's office in 1979).
8. The Massachusetts LDP has undergone only minor changes since its inception; the description here is accurate for 1983 and 1984, but differs in minor details from the structure of the program in earlier years.

9. 1982 data were used only in the tables at the beginning of the statistical appendix which show the awards, and the total amounts on deposit, for each participating bank during the May 1982 - November 1983 period; while it would have been interesting to have a record of the amounts on deposit with individual banks over a longer period, data for earlier years are not available (see note 7).
10. Actually, "Total 'C'" here is equal to "C/A" in the Treasurer's formula.
11. The difference between the interest rate bid by a bank and the minimum interest rate required is referred to here as the "excess i." Since a bank can submit simultaneous bids for both six-month and twelve-month deposits, it is possible that its "excess i" can differ between its two bids. In fact, this happened on 14 of the 133 linked deposit bid forms received during 1983. This study dealt with such cases by simply using the larger of a bank's two "excess i" numbers. The results obtained with the use of this simplification are only very slightly different than they would have been if the smaller of the two numbers had been used; a detailed check showed, for example, that no changes would have been necessary in the rankings of any of the banks included in Table III, below, and in Table IV there would have been just two cases where adjacently ranked banks would have switched positions.
12. Because the LDP includes both six-month and twelve-month deposits, there is no obvious single best measure of either the overall size of the program, nor of an individual bank's participation. From the point of view of outstanding deposits, a bank that receives two consecutive six-month deposits of \$1 million is in the identical position as a bank that receives one twelve-month deposit of the same amount; but from the point of view of total awards made, the first bank has received \$2 million rather than \$1 million. In performing the present quantitative analysis, four separate calculations were initially made: for six-month deposits only; for twelve-month deposits only; for weighted total deposits, where total deposits were defined as twelve-month deposits plus one-half of six-month deposits; and for unweighted total deposits, where six and twelve month deposits were simply added together. Looking at either maturity by itself clearly gives a partial picture of how the relationship between the amount bid for by a bank and the amount awarded to that bank is correlated with that bank's linked deposit score. Neither of the two total measures is clearly superior to the other; the unweighted totals are used here for simplicity and because they correspond most directly with the accounting measures used by the Treasurer. In any case, there was no significant difference between the results obtained using unweighted totals and those obtained when weighted totals were used.
13. In fact, of course, a significant qualitative distinction could be made between the state's biggest bank -- the First National Bank of Boston (now Bank of Boston) -- and the next three -- New England Merchants National Bank (now Bank of New England), Shamut Bank, and State Street Bank -- but creating a separate league for just one bank (even a bank that is "in a league by itself") was not seen as a viable option.

14. Even at the beginning of the LDP, League I was not limited to the state's "big four" banks. The Chairman of SCSI, who also served as a member of the Treasurer's Special Commission on Linked Deposits, and who played an active role in the design of the system, was a Senior Vice President of Boston's (although not the state's) fifth largest bank, United States Trust Company. In order to avoid any appearance of impropriety, he suggested a cut-off point that put his bank at the bottom of League I rather than at the top of League II, and that is where the cut-off point was placed.
15. The Colorado LDP grouped commerical banks into four geographic regions.
16. It may be worth noting that the current procedures for administering the maintenance of effort requirement were implemented following a report issued by the Social and Economic Opportunity Council (the group that established SCSI) on June 28, 1979, the last working day before its abolishment by Governor Edward King became effective. This report [Kittredge 1979] showed that roughly half of the 26 banks that received LDP awards in at least two of the first three bidding cycles were in violation of the maintenance of effort standard -- 11 of the 26 banks by a loose interpretation of the standard, 15 of 26 by a more stringent interpretation -- but that the Treasurer had continued to make LDP awards to these banks. Although the initial reaction of the Treasurer's office to this finding, as reported in the Boston Globe [June 29, 1979], was that it "was not disturbed at the report indicating many banks are not complying with their pledges" and that "it did not want to force them to live up to their pledges," it did in fact put the current procedures into place.
17. According to the Treasurer's office, current practice is to adopt the second of the two alternative answers to each of these four questions when making calculations in connection with the maintenance of effort requirement.
18. According to the Treasurer's office, no such report about any bank has ever been received from the Commissioner of Banking, nor is there any more detailed written explanation either of what kinds of discrimination this eligibility requirement is concerned with (e.g., racial, sexual, geographic and/or age? in lending and/or employment?) or of what is meant by the term "convicted."
19. Table II is based on the November bidding cycle; an analogous table based on the May bidding cycle is included in the statistical appendix. The data from the May bidding cycle are generally similar; in particular, they support all three of the conclusions stated here.
20. Such an analysis could make use of analysis of variance or related statistical techniques.
21. In a description of his state's LDP, the Treasurer of Illinois emphasizes this feature: "In order to eliminate subjectivity from our allocation, we use a computerized system..." [Campen, 1977, Appendix A].
22. In particular, precise conformity to "strict auction" procedures would

not have produced a "score-% r" of 1.0. For comparison, a "strict auction score-% r" was also calculated for each league in each month. The results showed that, in every case, if the actual total amount of awards made had been allocated according to strict auction rules, the correlation would have been substantially greater; presented in the same order as in Table V, the six correlation coefficients calculated in this way were 0.884, 0.465, 0.609, 0.136, 0.718, and 0.588 (all except the second and fourth of these are significantly different from zero at the 5% level of significance).

23. The related question of whether or not Massachusetts should continue to have a linked deposit program -- that is, of whether and to what extent an effectively reformed Massachusetts LDP could be expected to produce benefits to offset its cost to the Commonwealth (lower direct interest income on state deposits) -- has also been investigated as part of the present study. I hope to report the results of this still-to-be-completed analysis of the potential impact of the Massachusetts LDP in a future paper that will complement the present paper's analysis of its design and implementation.

REFERENCES

Campen, James T., A Linked Deposit System for Massachusetts? Information, Issues, and Analyses, Report to the Special Commission on State Investment, June 30, 1977.

Kittredge, Jack, "A Preliminary Evaluation of the Linked Deposit System in Massachusetts," Massachusetts Social and Economic Opportunity Council, June 1979.

Special Commission on State Investment, Final Report, Presented to the Massachusetts Social and Economic Opportunity Council, July 1977.

LINKED DEPOSIT PROGRAM MATERIALS DISTRIBUTED BY THE TREASURER OF MASSACHUSETTS

AN APPENDIX

to

PRIVATE BANKS AND PUBLIC MONEY:
AN ANALYSIS OF THE DESIGN AND IMPLEMENTATION
OF THE MASSACHUSETTS LINKED DEPOSIT PROGRAM

by

James T. Campen

Contents:

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LINKED DEPOSIT PROGRAM GUIDE

CORRESPONDENCE

- All mailings regarding this program should be forwarded to:

Robert Q. Crane, State Treasurer
c/o Investment Division
State House Room 227
Boston, Massachusetts 02133

TAX IDENTIFICATION

- 04-6002284 - The Commonwealth of Massachusetts is totally exempt from all withholding taxes.

OCTOBER 4, 1983

- Banks currently active in this program should have received their Maintenance Of Efforts Agreement. If not, contact us immediately on 727-2014.

OCTOBER 31, 1983

- Maintenance Of Efforts Agreements should have been mailed to the Treasurer's Office no later than October 31, 1983.

NOVEMBER 10, 1983

- Completed Linked Deposit Bid Forms should be forwarded to the Treasurer's Office by certified mail - return receipt.

Bid forms postmarked after November 10, 1983 will not be accepted.

NOVEMBER 17, 1983

- All banks who submitted bids will be notified of the results after 2:00 P.M.

Those banks who will be receiving awards will be given pertinent information regarding wiring of monies and issuance of Certificates of Deposits.

NOVEMBER 18, 1983

- Linked Deposit Awards will be made.

Banks receiving awards must issue a Certificate of Deposit dated November 18, 1983 and forward same to the Treasurer's Office the same day.

INVESTMENT FACT SHEETS

- After Certificates of Deposits are received at the Treasurer's Office, an Investment Fact Sheet detailing said investment will be forwarded to those banks receiving awards.

INTEREST AND REDEMPTION PAYMENTS

- All monies due the Commonwealth on Certificates of Deposits to be dated November 18, 1983 must be payable through the N. E. A. C. H. System.

Interest payments will be due on the last business day of each month, effective December 30, 1983 on Certificates of Deposit dated November 18, 1983.

LINKED DEPOSIT PROGRAM SUPPLEMENT

* * * * *

I DESCRIPTION:

The Linked Deposit Program has been designed to provide a fair return to the Commonwealth while re-directing state funds to in-state banks to aid and benefit the people of Massachusetts. Time deposits will be awarded under this program to banks located in Massachusetts which receive the highest ratings based on the criteria set out below.

II ELIGIBILITY:

Participation in the Linked Deposit System is voluntary. Any financial institution which can legally receive public deposits is eligible. Pending authorizing legislation, this will exclude credit unions. To encourage fair competition in the bidding for public funds, leagues have been established. Interested institutions will compete only with other banks in their leagues. The leagues are as follows:

LEAGUE I	Commercial banks with total assets of over \$200 million.
LEAGUE II	Commercial banks with assets of under \$200 million.
LEAGUE III	Thrift institutions (savings, co-operatives and savings and loan)

III MAXIMUM DEPOSIT AMOUNT AND TERM:

Commercials, savings, co-operatives and savings and loans may bid for any amount of deposits so long as a winning bid does not violate: the 55% limit imposed on capital, surplus, capital notes and undivided profits for commercial banks; the \$150,000 or 1 and 1/2% of shared capital restriction for co-operatives; (Restriction may be waived. See MGLA, Chapter 170, Section 16) or any other limitation or restriction imposed under Massachusetts General Laws or any applicable federal statute.

The following term deposits are being put out for bid:

12 MONTH TERM DEPOSIT - NOVEMBER 9, 1984	(357 days)
6 MONTH TERM DEPOSIT - MAY 18, 1984	(182 days)

IV ESTABLISHMENT OF MINIMUM RATES:

Interest rate minimums will be established at the time applications are solicited.

- (A) The minimum acceptable interest rate for League I will be the Money Rate for Certificates of Deposit, one million (\$100,000 units) as published in the Wall Street Journal Thursday, November 10, 1983.
(6 month term deposit - 12 month term deposit)
- (B) The minimum acceptable interest rate for League II will be 75 basis points below the rate established for League I.
(6 month term deposit - 12 month term deposit)
- (C) The minimum acceptable interest rate for League III will be 100 basis points below the rate established charged for League I.
(6 month term deposit - 12 month term deposit)

V LINKED DEPOSIT SCORE:

The Linked Deposit Score will be computed by each bank as part of its bid submission. This score can be obtained by inserting the amount of the component described below in the following formula:

$$.01 \left(\frac{B + C}{A} \right) = \text{LDS} + R = \text{TOTAL}$$

R = Interest rate bid expressed as a decimal.

- (A) = Total dollar value of all deposits located in Massachusetts, including repurchase agreements.
- (B) = Total dollar value of:
 - (1) In in-state loans, including loans secured by real property in the state.
 - (2) Investment instruments issued by public entities located in Massachusetts.
 - (3) Investments in direct obligation of the United States Government or its Agencies identified as collateral for Repurchase Agreements located in Massachusetts.

(C) = Total dollar value of the following loans made in Massachusetts:

- (1) All loans to small business, defined as having no more than 500 employees; no more than \$5 million in total assets; no more than \$250,000 net before tax profit; no more than \$2.5 million in net worth.
- (2) All student HELP loans.
- (3) All loans to organizations exempted from Federal Tax by Section 501 (c) (3) of the Internal Revenue Code.
- (4) All investment instruments issued by public entities located in Massachusetts.
- (5) All loans to organizations organized as community development corporations in accordance with M.G.L.A., Chapter 40F.
- (6) All loans to organizations licenses or applying for licensure as community or group residence providers under M.G.L.A., Chapter 19, Section 29 or who have a valid contract with the Department of Mental Health to provide residential services for mentally retarded persons, or who are certified or applying for certification as an intermediate care facility for mentally retarded persons.
- (7) Annual dollar value of Food Stamps distributed.
- (8) Housing loans limited to:

All mortgages and home improvement loans given in the census tract areas appearing in the "LISTING BY CENSUS TRACTS AREAS WHERE AVERAGE FAMILY INCOME IS LESS THAN 35% OF THE STATE AVERAGE", include 1 to 4 family, conventional, FHA-VA, 5 unit and commercial.

This figure is used in calendar year 1983 which will be reported to the Division of Banks and Banking.

FIGURES FOR USE IN THE FORMULA SHOULD BE AS OF SEPTEMBER 30, 1983
EXCEPT WHERE NOTED.

VI MAINTENANCE OF EFFORT AND NON-DISCRIMINATION REQUIREMENTS:

As part of the Linked Deposit bidding process, the participating bank will be required to sign a maintainance of efforts and non-discrimination statement. The Treasurer's Office with the assistance of the Banking Commissioner's Office will monitor compliance with the system.

VII LINKED DEPOSIT PAYMENTS THROUGH N. E. A. C. H.:

In order for the Treasurer's Office to receive its interest and maturity principal on the dates due, it will be necessary for the selected banks to allow the State Treasurer's Office to directly charge an account within the bank, or if the bank is not a member of the N. E. A. C. H., a charge will be made to an account in a correspondent bank who is a member of the N. E. A. C. H. System.

Once the bank is selected and the interest payments are determined, each selected bank will be supplied by the Treasurer's Office a listing showing the date and amount of interest due and the date and amount of the principal maturity.

On the last business day of each month, the Treasurer's Office will charge the bank account number you have supplied using the N. E. A. C. H.

This new procedure will allow this office to decrease its clerical work along with eliminating any float due to late payments or lost checks.

The first interest payments due the Commonwealth on certificates of deposits dated November 18, 1983 will commence on December 30, 1983.

Each bank will sign and forward along with their bid the attached form authorizing the State Treasurer to charge the account they have assigned.

VIII METHOD OF ALLOCATION:

Awards will be made through a process of mathematic proration between the funds available for deposit and Linked Deposit Scores. The deposits will be awarded at the rates bid, starting with the highest scoring bidder in each league and moving down. The Treasurer reserves the right to reject any or all bids in whole or part.

LINKED DEPOSIT BID FORM
DATED: NOVEMBER 10, 1983

I BANK: _____ TEL: _____
OFFICER: _____ TITLE: _____
ADDRESS: _____
STREET CITY/TOWN ZIP
CURRENT DEPOSITS: NOVEMBER 1983 \$ _____ MAY 1984 \$ _____

II BID STATUS (See II of Supplement) CHECK ONE JOURNAL RATE
Commercial - Assets over \$200 million LEAGUE I _____ Dated Nov. 10, 1983
Commercial - Assets under \$200 million LEAGUE II _____ Minus 75 Basis Points
Thrifts - (Savings, Co-operatives,
Savings and Loans) LEAGUE III _____ Minus 100 Basis Points

III BID AMOUNT AND TERM (See III of Supplement)

TERM - CHECK ONE OR MORE

AMOUNT OF BID

6 MONTH (182 days) _____ \$ _____
12 MONTH (357 days) _____ \$ _____

IV MINIMUM RATES (See IV of Supplement)

TERM - SEE MONEY RATE FOR CERTIFICATES OF DEPOSIT

ONE MILLION (\$100,000., UNITS) - WALL STREET JOURNAL
Dated Thursday, November 10, 1983

BID RATE

6 MONTH (182 days) _____ %
12 MONTH (357 days) _____ %

V COMPUTATION OF LINKED DEPOSIT SCORE

(See V of Supplement - all statistics should be given in dollar values to the nearest 1000's)

$$.01 \left(\frac{B + C}{A} \right) = \text{LDS} + R = \text{TOTAL}$$

$$.01 \left(\frac{\quad + \quad}{\quad} \right) = \quad + \quad =$$

LOANS OUTSTANDING (nearest 1,000)
AS OF SEPTEMBER 30, 1983

R = BID RATE (taken from Section IV) _____

A = Total in-state deposits (See V (A)) \$ _____

B = Total in-state loans (See V (B)) \$ _____

C = (1) Total small business loans (See V (C)) \$ _____

(2) Total student loans (total figure X 5) " " " \$ _____

(3) Total exempt organization loans " " " \$ _____

(4) Total investment instruments " " " \$ _____

(5) Total CDC loans " " " \$ _____

(6) Total Mental Health provider loans " " " \$ _____

(7) Total dollar value - Food Stamp Distribution
(total figure X 5) " " " \$ _____

SUB TOTAL \$ _____

(8) Total low income mortgages (total figure X 5) " " " \$ _____

TOTAL FOR C \$ _____

Total capital, surplus, capital notes and undivided profits \$ _____

LINKED DEPOSIT SCORE _____

VI MAINTENANCE OF EFFORT AND NON-DISCRIMINATION STATEMENT (See VI of Supplement)

As a condition of award the Bank agrees to maintain its present loan efforts in the areas listed in component C on the bid form. The bank further agrees to increase its loans in those areas by an amount equal to at least 70% of the amount of the total award made to the Bank under this program.

The Bank understands and acknowledges that it will be excluded from participation in the program in the event that it is reported to the Treasurer's Office by the Commissioner of Banking that the Bank has been convicted of any discriminatory offense in the past three years.

SIGNED: _____

VII AUTHORIZATION OF N. E. A. C. H. SYSTEM (See VII of Supplement)

I, _____, as part of the condition of accepting a deposit on the Linked Deposit Program of the State Treasurer of the Commonwealth of Massachusetts dated November 18, 1983, hereby authorize him to charge bank account No. _____ located _____

_____ for the total interest due on the last business day of each month and for the total principal due on maturity.

DATE: _____

SIGNED: _____

PLEASE PRINT:

NAME

TITLE

BANK NAME

COMPLETED FORMS SHOULD BE RETURNED TO THE STATE TREASURER'S OFFICE

 * MAINTENANCE OF EFFORT *

BANK: _____ DATE: _____
 OFFICER: _____ PHONE: _____
 ADDRESS: _____

<u>Deposit amount under</u> <u>Linked Program</u>	<u>Certificate of</u> <u>Deposit #</u>	<u>Issue Date</u>	<u>Maturity Date</u>
--	---	-------------------	----------------------

Loans outstanding as of.
 March 31, 1984
 (NEAREST THOUSANDS) _____

1. Total small business loans	\$ _____
2. Total student HELP loans	\$ _____
3. Total exempt organizational loans	\$ _____
4. Total Investment instruments	\$ _____
5. Total CDC loans	\$ _____
6. Total Mental Health provider loans	\$ _____
7. Total annual dollar value of Food Stamp Distribution	\$ _____
8. Total low income mortgages for calendar year 1983	\$ _____

GRAND TOTAL: \$ _____

BY: _____
 AUTHORIZED SIGNATURE

STATISTICAL APPENDIX

to

PRIVATE BANKS AND PUBLIC MONEY:
AN ANALYSIS OF THE DESIGN AND IMPLEMENTATION
OF THE MASSACHUSETTS LINKED DEPOSIT PROGRAM

by

James T. Campen

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(For sources and explanations, see text of report, esp. pp. 9-12.)

DEPOSITORY INSTITUTIONS PARTICIPATING IN MASSACHUSETTS LINKED DEPOSIT PROGRAM, 1982-83*

LEAGUE I

- I1 Bank of Boston/ Middlesex -- Burlington [formerly: Old Colony/Middlesex; in II thru May 83]
- I2 Bank of Boston/Western Mass -- Holyoke [formerly: Old Colony/Hampden Co.; in II thru Nov 82]
- I3 Capitol Bank and Trust Co -- Boston [in II thru May 82]
- I4 Mechanics Bank -- Worcester [in II thru 82]
- I5 Rockland Trust Co
- I6 Security National Bank -- Danvers [in II thru May 83]
- I7 South Shore Bank and Trust -- Quincy
- I8 United States Trust Co -- Boston
- I9 Bank of New England -- Boston

LEAGUE II

- II1 Bank of Boston/Bristol County -- New Bedford [formerly: Old Colony/Bristol County]
- II2 [no bank with this code; see II]
- II3 Bank of Boston/Norfolk -- Wellesley Hills [formerly: Old Colony/Norfolk]
- II4 Bank of Massachusetts -- Chelsea
- II5 Bank of New England/Baystate -- Lawrence
- II6 Bank of New England/Bristol County -- Fall River
- II7 Bank of New England/Northshore -- Gloucester
- II8 Boston Bank of Commerce
- II9 Cape Ann Bank and Trust -- Gloucester
- II10 Century Bank and Trust -- Somerville

- *Notes: 1. Bank code prefixes refer to League that bank was in as of November 83, or most recent bid; the growth of some banks resulted in their being promoted from League II to League I.
2. Name changes and pre-merger names are indicated where I am aware of them.
3. League III is separated into two sub-leagues, one consisting of savings banks and the other consisting of cooperative banks plus federal savings and loan associations.
4. Within each league or subleague an alphabetical list of banks that submitted bids in 1983 is followed by an alphabetical list of banks that received awards in 1982 but did not bid in 1983. I have not reviewed the 1982 bid forms to determine if any additional banks bid that year.

III1 Century North Shore Bank and Trust -- Lynn
 III2 Colonial National Bank -- Danvers
 III3 Coolidge Bank and Trust Co -- Watertown
 III4 Durfee Attleboro Bank -- Fall River
 III5 First National Bank of Athol

 III6 Gloucester National Bank
 III7 Home National Bank -- Milford
 III8 Lee National Bank
 III9 Liberty Bank and Trust -- Boston
 III10 Lincoln Trust Co -- Hingham

 III11 Lowell Bank and Trust
 III12 Luzo Bank and Trust Co -- New Bedford
 III13 Malden Trust Co
 III14 Massachusetts Bank and Trust -- Brockton
 III15 Northeast National Bank -- Amesbury

 III16 Park West Bank and Trust -- Springfield
 III17 [no bank with this code; see I6]
 III18 Shawmut Bank/Bristol County -- New Bedford
 III19 University Bank and Trust Co -- Chestnut Hill
 III20 U S Trust Co/Braintree

 III21 [no bank with this code; see II32]
 III22 U S Trust Co/Middlesex -- Cambridge [May 83: U S Trust Co/Charlesbank; 1982: Charlesbank Trust Co.]
 III23 Brookline Trust Co
 III24 [no bank with this code; see I3]
 III25 Commonwealth Bank and Trust Co

 III26 Commonwealth Bank/Norfolk County
 III27 First Agricultural Bank -- Pittsfield
 III28 First National Bank of Malden
 III29 Hancock Bank and Trust Co -- Quincy
 III30 Harbor National Bank -- Boston

 III31 [no bank with this code; see I4]
 III32 Old Colony/Franklin County
 III33 [no bank with this code; see I2]
 III34 Woburn National Bank
 III35

LEAGUE III/DIVISION M -- SAVINGS BANKS

- M1 Beverly Savings Bank
- M2 Boston Five Cent Savings Bank
- M3 Bristol County Savings Bank -- Taunton
- M4 Clinton Savings Bank
- M5 Community Savings Bank -- Holyoke
- M6 Danvers Savings Bank
- M7 East Weymouth Savings Bank
- M8 Fall River Five Cent Savings Bank
- M9 First American Bank for Savings -- Boston
- M10 Heritage Bank for Savings -- Amherst [7/82 merger: Amherst Savings Bank & Franklin Savings Inst]
- M11 Hibernia Savings Bank -- Boston
- M12 Home Savings Bank -- Boston
- M13 Hudson Savings Bank
- M14 Massachusetts Bank for Savings -- Reading
- M15 Merrimac Savings Bank
- M16 Mutual Bank for Savings -- Boston
- M17 Orange Savings Bank
- M18 Peoples Savings Bank -- Holyoke
- M19 Peoples Savings Bank -- Worcester
- M20 Somerset Savings Bank -- Somerville [as of 5/83: incorporates Somerville Savings Bank]
- M21 South Boston Savings Bank
- M22 South Weymouth Savings Bank
- M23 Winchester Savings Bank
- M24 Melrose Savings Bank
- M25 Northampton Institution for Savings
- M26 Worcester Cty Inst for Savings

LEAGUE III/DIVISION C -- COOPERATIVE BANKS + FEDERAL S&Ls

C1 Beacon Cooperative Bank -- Brighton
C2 Central Cooperative Bank -- Somerville
C3 Community Cooperative Bank -- Medford
C4 Coolidge Corner Cooperative Bank -- Brookline
C5 Economy Cooperative Bank -- Merrimac

C6 Everett Cooperative Bank
C7 Glendale Cooperative Bank -- Everett
C8 Hillside-Cambridge Cooperative Bank -- Medford
C9 Hyde Park Cooperative Bank -- Boston
C10 Merchants Cooperative Bank -- Boston

C11 Mount Washington Cooperative Bank -- Boston
C12 Norwood Cooperative Bank
C13 Pioneer Financial A Cooperative Bank -- Malden
C14 Quincy Cooperative Bank
C15 Saugus Cooperative Bank

C16 Workingsmen's Cooperative Bank -- Boston
C17 Commonwealth Cooperative Bank
C18 New Bedford Acushnet Cooperative Bank

F1 Home Federal Savings and Loan -- Worcester
F2 Leader Federal Savings and Loan -- Lexington
F3 Milford Federal Savings and Loan
F4 Scituate Federal Savings and Loan
F5 Commonwealth Federal Savings and Loan -- Lowell

LDP AWARDS TO AND LDP FUNDS HELD BY INDIVIDUAL BANKS
MAY 1982 - NOVEMBER 1983
LEAGUE I: BIG COMMERCIAL BANKS

Bank Code	May 6mo	1982 12mo	Nov 6mo	1982 12mo	May 6mo	1983 12mo	Nov 6mo	1983 12mo	May82 Total	Nov82 Total	May83 Total	Nov83 Total	Amt on Nov82	Deposit May83	After Nov83
I1		1000		1000		1000		1000	1000	1000	1000	1000	2000	2000	2000
I2	2000			3000		1000		3000	2000	2500	1000	3000	2500	3500	4000
I3		3750				3750		3000	3750	3000	3750	3000	6750	6750	6750
I4	1000					1000		1000	1000	1000	1000	1000	1000	2000	2000
I5		2700		1500		2700		1500	2700	1500	2700	1500	4200	4200	4200
I6	2000		2000		2000		2000		2000	2000	2000	2000	2000	2000	2000
I7		2000				2000		2000	2000	0	2000	2000	2000	2000	4000
I8		2500	6000	1500	6000	2500	3500	4500	2500	7500	8500	8000	10000	10000	10500
I9	1000								1000	0	0	0	0	0	0

LDP AWARDS TO AND LDP FUNDS HELD BY INDIVIDUAL BANKS
MAY 1982 - NOVEMBER 1983
LEAGUE II: OTHER COMMERCIAL BANKS

Bank Code	May 6mo	1982 12mo	Nov 6mo	1982 12mo	May 6mo	1983 12mo	Nov 6mo	1983 12mo	May82 Total	Nov82 Total	May83 Total	Nov83 Total	Amt on Nov82	Deposit May83	After Nov83
II1	1000	1000		1000			1000		2000	1000	0	1000	2000	1000	1000
II3		1000			1000		2000		1000	1000	1000	2000	2000	2000	2000
II4		100	150		150	100	150		100	150	250	150	250	250	250
II5		1000			1000		1000		1000	0	1000	1000	1000	1000	1000
II6				1400	1000		2400		0	1400	1000	2400	1400	2400	2400
II7							300	300	0	0	0	600	0	600	600
II8				100			500		0	100	0	500	100	100	500
II9	400			400	200				400	400	200	0	400	600	0
II10	1000		750	1750	750		2500		1000	2500	750	2500	2500	2500	2500
II11		400	500		500	400	500	500	400	500	900	500	900	900	900
II12		400				400		400	400	0	400	0	400	400	400
II13		1000				2000		1000	1000	0	2000	0	1000	2000	2000
II14	2000		2000		2000		1000	1000	2000	2000	2000	2000	2000	2000	2000
II15			500		750				0	500	750	0	500	750	0
II16		300		300		300	300	300	300	300	300	300	600	600	600
II17		1000			1390	300	2000	400	1000	0	1390	2000	1000	1390	2000
II18			300		374				0	300	374	400	300	374	400
II19			500			100	300		0	500	100	300	500	600	400
II20		1000	500		500	1000	500		1000	500	1500	500	1500	1500	1500
II21		1300	1000		2300				1300	1000	2300	0	2300	2300	0
II22							100		0	0	0	100	0	0	100
II23	1000		1000			1000			1000	1000	0	1000	1000	0	1000
II24		1000				1000			1000	0	0	1000	1000	0	1000
II25						500	500		0	500	500	500	500	1000	1000
II26			250			250			0	250	250	0	250	250	250
II28		2000		500		2500	500		2000	500	2500	500	2500	3000	3000
II29		1200	1000			1200	1000		1200	1000	1200	1000	2200	2200	2200
II30			2000			1000	2000		0	2000	1000	2000	2000	3000	3000
II32		1000			1000		1000		1000	0	1000	1000	1000	1000	1000
II33				500					0	500	0	0	500	500	0
II35				500					0	500	0	0	500	500	0
II36				500					0	500	0	0	500	500	0
II37	1000			2000					1000	2000	0	0	2000	2000	0
II38	1000								1000	0	0	0	0	0	0
II39		1000							1000	0	0	0	1000	0	0
II40		1000		1500					1000	1500	0	0	2500	1500	0
II42				500					0	500	0	0	500	500	0
II44			100						0	100	0	0	100	0	0

LDP AWARDS TO AND LDP FUNDS HELD BY INDIVIDUAL BANKS
MAY 1982 - NOVEMBER 1983
LEAGUE IIIM: SAVINGS BANKS ONLY

Bank Code	May1982 6mo	May1982 12mo	Nov1982 6mo	Nov1982 12mo	May1983 6mo	May1983 12mo	Nov1983 6mo	Nov1983 12mo	May82 Total	Nov82 Total	May83 Total	Nov83 Total	Amt on Nov82	Deposit May83	After Nov83
M1	500	500			500			500	1000	0	500	500	500	500	500
M2		10000		10000		10000			10000	10000	10000	0	20000	20000	10000
M3					500	500		500	0	0	500	500	0	500	1000
M4					100	100			0	0	100	0	0	100	100
M5					250	250			0	0	250	0	0	250	250
M6				500	500	500		500	0	500	500	500	500	1000	1000
M7		1000		1000	1000	1000		1000	1000	1000	1000	1000	2000	2000	2000
M8				400	250	250		500	0	400	250	500	400	650	750
M9				4000	500	500		4000	0	4000	500	4000	4000	4500	4500
M10	2000			500	1000	500		500	2000	500	1000	500	500	1500	1500
M11		1300		200	550	750		750	1300	200	1300	750	1500	1500	1500
M12					100				0	0	100	0	0	100	0
M13		1000			1000	1000			1000	0	1000	0	1000	1000	1000
M14					1000	1000			0	0	1000	0	0	1000	1000
M15		100			100	100		100	100	0	100	100	100	100	200
M16									0	0	0	0	0	0	0
M17		1000		200	1000	1000		200	1000	200	1000	200	1200	1200	1200
M18				500	500	1000			0	500	500	1000	500	1000	1000
M19	2000			2000				2000	2000	2000	0	2000	2000	2000	2000
M20	1000		750	2000	1000	3000			1000	2750	1000	3000	2750	3000	3000
M21	1750	1750	1750	3500	1750	1750			3500	5250	3500	0	7000	7000	1750
M22		1000		500	1000	500		500	1000	500	1000	500	1500	1500	1500
M23					200	300		300	0	0	200	300	0	200	500
M24				500					0	500	0	0	500	500	0
M25				750					0	750	0	0	750	750	0
M26	2000								2000	0	0	0	0	0	0

Note: One November 1982 deposit is missing from this listing because it was illegible on xerox copy of deposit listing.

LDP AWARDS TO AND LDP FUNDS HELD BY INDIVIDUAL BANKS
MAY 1982 - NOVEMBER 1983
LEAGUE IIIC: COOP BANKS + FEDERAL S&Ls ONLY

Bank Code	May1982 6mo	May1982 12mo	Nov1982 6mo	Nov1982 12mo	May1983 6mo	May1983 12mo	Nov1983 6mo	Nov1983 12mo	May82 Total	Nov82 Total	May83 Total	Nov83 Total	Amt on Nov82	Deposit May83	After Nov83
C1			200			100	200		0	200	100	200	200	300	300
C2		1300	600			1300	600		1300	600	1300	600	1900	1900	1900
C3		150				150	150		150	0	150	150	150	150	300
C4			100		150				0	100	150	0	100	150	0
C5		100	500			100	50		100	500	100	50	600	600	150
C6		300	300			300	300		300	300	300	300	600	600	600
C7		250					100		250	0	0	100	250	0	100
C8		200							200	0	0	0	200	0	0
C9		150				150			150	0	150	0	150	150	150
C10			2000			500	2000		0	2000	500	2000	2000	2500	2500
C11	400		400		400		400		400	400	400	400	400	400	400
C12			150		250				0	150	250	250	150	250	250
C13			500			500	250		0	500	500	500	500	500	1000
C14			500		500		500		0	500	500	500	500	500	500
C15						10	20		0	0	10	20	0	10	30
C16			1400		1400		1400		0	1400	1400	1400	1400	1400	1400
C17			1500						0	1500	0	0	1500	1500	0
C18			100						0	100	0	0	100	0	0
F1			100		100				0	100	100	0	100	100	0
F2		100				100			100	0	100	0	100	100	100
F3			100				100		0	100	0	100	100	100	100
F4		100				100			100	0	100	0	100	100	100
F5		100							100	0	0	0	100	0	0

MAY 1983
 LEAGUE I
 (For bids & awards, totals = 12mo amount + 6mo amount)

DETAILS OF LDP SCORES AND AWARDS

Bank Code	Mass Depts (\$Mil)	Small Bus	Stud x5	Exemp Orgs	Inv Insts	CDC	Ment Hlth	Fd St	Mort x5	Total "C" In-St	Max Ex i	LDS Pts	Total Pts	\$Bid Total	\$Awd Total	Awd/ Bid-%
I2	189	0.215	0.022	0.000	0.012	0.018	0.000	0.016	0.207	0.489	0.639	0	1.129	3000	1000	33%
I3	150	0.032	0.026	0.000	0.147	0.000	0.000	0.000	0.040	0.245	0.587	0	0.833	5000	3750	75%
I4	195	0.257	0.004	0.000	0.078	0.000	0.000	0.000	0.033	0.373	0.691	0	1.064	2000	1000	50%
I5	234	0.395	0.090	0.001	0.059	0.000	0.000	0.077	0.003	0.625	0.736	0	1.361	3500	2700	77%
I7	435	0.454	0.089	0.007	0.007	0.001	0.005	0.033	0.147	0.742	0.747	0	1.490	3000	2000	67%
I8	401	0.349	0.033	0.002	0.046	0.000	0.008	0.000	0.087	0.525	0.795	0	1.320	13000	8500	65%
AVE	267	0.284	0.044	0.002	0.058	0.003	0.002	0.021	0.086	0.500	0.699	0	1.199	4917	3158	61%
MIN	150	0.032	0.004	0.000	0.007	0.000	0.000	0.000	0.003	0.245	0.587	0	0.833	2000	1000	33%
MAX	435	0.454	0.090	0.007	0.147	0.018	0.008	0.077	0.207	0.742	0.795	0	1.490	13000	8500	77%
TOTAL BIDS AND AWARDS:														29500	18950	64%

DETAILS OF LDP SCORES AND AWARDS
 NOVEMBER 1983 LEAGUE I UNWEIGHTED TOTAL BASIS
 (For bids & awards, totals = 12mo amount + 6mo amount)

Bank Code	Mass Depts (\$Mil)	Small Bus	Stud x5	Exemp Orgs	Inv Insts	CDC	Ment Hlth	Fd St	Mort x5	Total "C"	Total In-St	Max Ex i	LDS Pts	Total Pts	\$Bid Total	\$Awd Total	Awd/ Bid-%
I1	186	0.287	0.173	0.000	0.022	0.002	0.000	0.000	0.063	0.546	0.583	0	1.128	1.128	4585	1000	22%
I2	247	0.191	0.034	0.003	0.010	0.013	0.000	0.022	0.194	0.468	0.569	0	1.036	1.036	5000	3000	60%
I3	168	0.007	0.025	0.000	0.140	0.000	0.000	0.000	0.033	0.207	0.549	0	0.756	0.756	5750	3000	52%
I4	210	0.263	0.004	0.000	0.076	0.000	0.000	0.000	0.007	0.351	0.737	0	1.088	1.088	6000	1000	17%
I5	271	0.370	0.090	0.001	0.060	0.000	0.000	0.068	0.002	0.592	0.707	0	1.299	1.299	1500	1500	100%
I6	189	0.103	0.081	0.002	0.027	0.002	0.002	0.000	0.199	0.415	0.728	0	1.144	1.144	2000	2000	100%
I7	461	0.449	0.098	0.007	0.011	0.001	0.006	0.034	0.097	0.702	0.756	0	1.458	1.458	5000	2000	40%
I8	447	0.314	0.032	0.014	0.044	0.000	0.006	0.000	0.000	0.410	0.735	0	1.145	1.145	12000	7500	63%
AVE	272	0.248	0.067	0.003	0.049	0.002	0.002	0.016	0.075	0.461	0.671	0	1.132	1.132	5229	2625	57%
MIN	168	0.007	0.004	0.000	0.010	0.000	0.000	0.000	0.000	0.207	0.549	0	0.756	0.756	1500	1000	17%
MAX	461	0.449	0.173	0.014	0.140	0.013	0.006	0.068	0.199	0.702	0.756	0	1.458	1.458	12000	7500	100%
TOTAL BIDS AND AWARDS:															41835	21000	50%

MAY 1983
 (For bids & awards, totals = 12mo amount + 6mo amount)

DETAILS OF LDP SCORES AND AWARDS
 LEAGUE II UNWEIGHTED TOTAL BASIS

Bank Code	Mass Depts (\$Mil)	Small Bus	Stud x5	Exemp Orgs	Inv Insts	CDC	Hlth	Ment	Fd St x5	Mort x5	Total "C" In-St	Max Ex i	LDS Pts	Total Pts	\$Bid Total	\$Awd Total	Awd/Bid-%
II1	143	0.283	0.202	0.000	0.022	0.000	0.000	0.000	0.000	0.037	0.543	0.629	0	1.172	3000	1000	33%
II3	129	0.101	0.082	0.000	0.028	0.001	0.000	0.000	0.016	0.004	0.232	0.508	0	0.739	2000	1000	50%
II4	4	0.097	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.548	0.645	0.613	0	1.258	250	250	100%
II5	131	0.294	0.076	0.001	0.071	0.000	0.000	0.000	0.000	0.085	0.526	0.741	0.250	1.266	2000	1000	50%
II6	100	0.167	0.048	0.001	0.013	0.000	0.000	0.000	0.029	0.427	0.686	0.582	0.200	1.268	6200	1000	16%
II8	10	0.015	0.000	0.000	0.015	0.000	0.000	0.000	0.099	1.009	1.137	0.277	0.100	1.415	1000	0	0%
II9	76	0.361	0.024	0.002	0.052	0.003	0.001	0.000	0.000	0.000	0.445	0.656	0	1.101	500	200	40%
II10	100	0.331	0.070	0.006	0.118	0.000	0.000	0.000	0.011	0.186	0.722	0.735	0	1.457	1750	750	43%
II11	22	0.256	0.093	0.000	0.260	0.000	0.000	0.000	0.014	0.111	0.734	1.015	0	1.748	1000	900	90%
II12	22	0.436	0.082	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.524	0.697	0.250	1.221	400	400	100%
II13	141	0.232	0.063	0.008	0.005	0.002	0.000	0.000	0.000	0.144	0.454	0.528	0.550	0.982	2000	2000	100%
II14	148	0.426	0.105	0.005	0.057	0.005	0.000	0.000	0.106	0.147	0.852	0.777	0	1.629	2000	2000	100%
II15	27	0.137	0.020	0.002	0.008	0.000	0.000	0.000	0.057	0.431	0.653	0.502	0.205	1.155	1500	750	50%
II16	39	0.280	0.026	0.000	0.039	0.000	0.000	0.000	0.015	0.000	0.360	0.575	0	0.935	300	300	100%
II17	68	0.295	0.091	0.000	0.055	0.000	0.000	0.000	0.000	0.000	0.442	0.969	0.375	1.411	2780	1390	50%
II18	18	0.136	0.049	0.007	0.011	0.000	0.005	0.005	0.029	0.281	0.518	0.660	0.450	1.178	674	374	55%
II19	15	0.510	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.107	0.617	0.637	0	1.254	500	100	20%
II20	78	0.268	0.301	0.000	0.095	0.012	0.000	0.000	0.000	0.040	0.716	0.656	0	1.372	1500	1500	100%
II21	45	0.588	0.000	0.002	0.122	0.000	0.004	0.000	0.000	0.628	1.344	1.093	0	2.437	5400	2300	43%
II25	29	0.194	0.099	0.001	0.027	0.000	0.000	0.000	0.000	0.000	0.321	0.571	0.600	0.892	1000	500	50%
II26	78	0.154	0.058	0.004	0.015	0.000	0.001	0.001	0.142	0.199	0.574	0.733	0.250	1.306	1000	250	25%
I6	127	0.141	0.079	0.005	0.030	0.001	0.002	0.000	0.000	0.353	0.611	0.983	0.450	1.594	2000	2000	100%
II28	124	0.221	0.062	0.011	0.041	0.000	0.001	0.001	0.274	0.503	1.112	0.812	0.250	1.924	6000	2500	42%
II29	59	0.100	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.276	0.377	0.598	0	0.975	2000	1200	60%
II30	105	0.418	0.014	0.000	0.035	0.000	0.000	0.000	0.000	0.007	0.474	0.772	0	1.247	6050	1000	17%
II32	62	0.011	0.017	0.002	0.027	0.000	0.000	0.000	0.113	0.096	0.266	0.509	0	0.775	1500	1000	67%
AVE	73	0.248	0.064	0.002	0.044	0.001	0.001	0.001	0.035	0.216	0.611	0.686	0.151	1.297	2089	987	58%
MIN	4	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.232	0.277	0	0.739	250	0	0%
MAX	148	0.588	0.301	0.011	0.260	0.012	0.005	0.005	0.274	1.009	1.344	1.093	0.600	2.437	5.38E+81	2500	100%

TOTAL BIDS AND AWARDS:

54304 25664 47%

NOVEMBER 1983
LEAGUE II
UNWEIGHTED TOTAL BASIS
(For bids & awards, totals = 12 month amount + 6 month amount)

DETAILS OF LDP SCORES AND AWARDS

Bank Code	Mass Depts (\$Mil)	Small Bus	Stud x5	Exemp Orgs	Inv Insts	CDC	Ment Hlth	Fd St x5	Mort x5	Total "C" In-St	Max Ex i	LDS Pts	Total Pts	\$Bid Total	\$Awd Total	Awd/Bid-%
III1	69	0.246	0.047	0.000	0.000	0.003	0.000	0.088	0.498	0.883	0.395	0.250	1.278	4000	500	13%
III3	160	0.098	0.082	0.000	0.028	0.001	0.000	0.014	0.003	0.226	0.361	0.250	0.587	6000	2000	33%
III4	8	0.075	0.000	0.000	0.000	0.000	0.000	0.000	0.235	0.310	0.568	0	0.878	150	150	100%
III5	146	0.303	0.079	0.003	0.064	0.000	0.001	0.000	0.086	0.534	0.716	0.050	1.250	2000	1000	50%
III6	98	0.342	0.052	0.003	0.004	0.000	0.000	0.031	0.564	0.997	0.658	0.250	1.655	9200	2400	26%
III7	84	0.316	0.005	0.002	0.028	0.003	0.000	0.000	0.354	0.709	0.606	0	1.315	800	600	75%
III8	9	0.014	0.000	0.000	0.000	0.000	0.000	0.630	0.000	0.644	0.728	0	1.372	800	500	63%
III10	107	0.384	0.072	0.004	0.105	0.000	0.000	0.010	0.278	0.854	0.775	0	1.628	4000	2500	63%
III11	29	0.219	0.015	0.000	0.300	0.000	0.000	0.002	0.020	0.555	0.892	0	1.447	1000	500	50%
III14	159	0.497	0.097	0.004	0.056	0.004	0.000	0.088	0.142	0.889	0.817	0	1.706	4000	2000	50%
III16	43	0.280	0.112	0.000	0.043	0.000	0.000	0.000	1.055	1.491	0.581	0	2.072	1200	300	25%
III17	77	0.347	0.100	0.000	0.088	0.000	0.000	0.000	0.000	0.535	1.080	0.500	1.615	3095	2000	65%
III18	20	0.125	0.045	0.007	0.011	0.000	0.004	0.005	0.310	0.507	0.677	0.350	1.184	900	400	44%
III19	19	0.385	0.000	0.000	0.000	0.000	0.000	0.000	0.053	0.438	0.483	0	0.921	300	300	100%
III20	84	0.202	0.294	0.000	0.091	0.011	0.000	0.000	0.123	0.720	0.576	0	1.296	1500	500	33%
III22	7	0.000	0.000	0.000	0.000	0.000	0.000	0.486	1.245	1.731	0.460	0	2.191	300	100	33%
III23	147	0.300	0.077	0.001	0.049	0.000	0.000	0.009	0.000	0.435	0.575	0	1.011	1000	1000	100%
III24	32	0.453	0.000	0.002	0.000	0.000	0.008	0.000	0.090	0.553	0.750	0	1.303	2290	1000	44%
III25	25	0.259	0.139	0.001	0.048	0.000	0.000	0.000	0.447	0.894	0.780	0.550	1.674	700	500	71%
III28	140	0.208	0.043	0.013	0.038	0.000	0.000	0.206	0.467	0.974	0.800	0	1.775	5000	500	10%
III29	67	0.138	0.002	0.000	0.000	0.000	0.000	0.000	0.286	0.425	0.553	0	0.978	2000	1000	50%
III30	113	0.353	0.014	0.000	0.147	0.000	0.000	0.000	0.012	0.526	0.656	0	1.182	3500	2000	57%
III32	65	0.010	0.015	0.001	0.057	0.000	0.000	0.105	0.000	0.189	0.787	0	0.975	2000	1000	50%
AVE	74	0.241	0.056	0.002	0.050	0.001	0.001	0.073	0.272	0.696	0.664	0.096	1.361	2423	989	52%
MIN	7	0.000	0.000	0.000	0.057	0.000	0.000	0.000	0.000	0.189	0.361	0	0.587	150	100	10%
MAX	160	0.497	0.294	0.013	0.300	0.011	0.008	0.630	1.245	1.731	1.080	0.550	2.191	9200	2500	100%

TOTAL BIDS AND AWARDS:

55735 22750 41%

MAY 1983 DETAILS OF LDP SCORES AND AWARDS
LEAGUE III -- SAVINGS BANKS UNWEIGHTED TOTAL BASIS
(For bids & awards, totals = 12 month amount + 6 month amount)

Bank Code	Mass Depts (\$Mil)	Small Bus	Stud x5	Exemp Orgs	Inv Insts	CDC	Ment Hlth	Fd St x5	Mort x5	Total "C" In-St	Max Ex i	LDS Pts	Total Pts	\$Bid Total	\$Awd Total	Awd/Bid-%	
M1	135	0.000	0.068	0.036	0.000	0.000	0.000	0.011	0.000	0.115	0.753	0	0.868	0.868	2000	500	25%
M2	993	0.104	0.317	0.007	0.000	0.000	0.000	0.001	0.235	0.664	0.540	0	1.204	1.204	20000	10000	50%
M4	62	0.004	0.031	0.000	0.000	0.000	0.000	0.000	0.202	0.237	0.719	0	0.956	0.956	150	100	67%
M5	343	0.126	0.136	0.009	0.000	0.000	0.000	0.005	0.487	0.763	0.573	0	1.336	1.336	1000	250	25%
M6	100	0.012	0.108	0.000	0.000	0.000	0.000	0.000	0.008	0.128	0.683	0	0.811	0.811	4800	500	10%
M7	51	0.041	0.000	0.001	0.000	0.000	0.000	0.015	0.079	0.136	0.726	0	0.863	0.863	1000	1000	100%
M8	135	0.000	0.144	0.006	0.000	0.000	0.000	0.000	0.841	0.990	0.539	0	1.529	1.529	500	250	50%
M9	254	0.001	0.053	0.000	0.000	0.000	0.000	0.000	2.269	2.323	0.837	0	3.160	3.160	2000	500	25%
M10	228	0.000	0.023	0.010	0.000	0.000	0.000	0.000	0.283	0.316	0.610	0	0.926	0.926	2000	1000	50%
M11	42	0.011	0.054	0.000	0.050	0.000	0.000	0.000	0.333	0.448	0.733	0	1.182	1.182	1300	1300	100%
M12	326	0.002	0.142	0.004	0.000	0.000	0.000	0.000	0.384	0.533	1.095	0	1.628	1.628	10000	100	1%
M13	70	0.058	0.032	0.003	0.000	0.000	0.000	0.000	1.584	1.676	0.650	0.625	2.326	2.951	2000	1000	50%
M14	210	0.016	0.132	0.004	0.000	0.000	0.000	0.000	0.008	0.161	0.688	0.500	0.849	1.349	1500	1000	67%
M15	8	0.071	0.002	0.000	0.000	0.000	0.000	0.000	0.724	0.797	0.571	0.250	1.369	1.619	100	100	100%
M17	26	0.043	0.184	0.012	0.000	0.000	0.000	0.000	2.687	2.926	0.742	0	3.668	3.668	1000	1000	100%
M18	159	0.008	0.070	0.003	0.000	0.000	0.000	0.000	0.788	0.869	0.813	0.100	1.682	1.782	2000	500	25%
M20	63	0.010	0.000	0.001	0.000	0.013	0.000	0.000	0.761	0.785	0.857	1.200	1.642	2.842	3500	1000	29%
M21	525	0.000	0.053	0.012	0.001	0.000	0.000	0.000	0.378	0.444	0.350	0	0.794	0.794	3500	3500	100%
M22	105	0.047	0.160	0.002	0.000	0.000	0.000	0.000	0.008	0.217	0.569	0	0.786	0.786	1000	1000	100%
AVE	202	0.029	0.090	0.006	0.003	0.001	0.000	0.002	0.635	0.765	0.687	0.141	1.451	1.592	3124	1295	56%
MIN	8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.115	0.350	0	0.786	0.786	100	100	1%
MAX	993	0.126	0.317	0.036	0.050	0.013	0.000	0.015	2.687	2.926	1.095	1.200	3.668	3.668	20000	10000	100%
TOTAL BIDS AND AWARDS:															59350	24600	41%

DETAILS OF LDP SCORES AND AWARDS

NOVEMBER 1983 LEAGUE IIIM -- SAVINGS BANKS UNWEIGHTED TOTAL BASIS
(For bids & awards, totals = 12 month amount + 6 month amount)

Bank Code	Mass Depts (\$Mil)	Small Bus	Stud x5	Exemp Orgs	Inv Insts	CDC	Ment Hlth	Fd St	Mort x5	Total "C" In-St	Max Ex i	LDS Pts	Total Pts	\$Bid Total	\$Awd Total	Awd/ Bid-%
M1	142	0.000	0.013	0.005	0.000	0.000	0.000	0.000	0.056	0.074	0.724	0.500	0.798	2000	500	25%
M3	117	0.002	0.077	0.002	0.000	0.000	0.000	0.000	0.152	0.232	0.562	0.500	0.795	1000	500	50%
M6	107	0.025	0.124	0.000	0.000	0.000	0.000	0.000	0.002	0.151	0.670	0	0.821	5000	500	10%
M7	53	0.103	0.000	0.001	0.000	0.000	0.000	0.012	0.019	0.135	0.733	0	0.868	1000	1000	100%
M8	147	0.000	0.106	0.005	0.000	0.000	0.000	0.000	0.643	0.754	0.594	0	1.348	1000	500	50%
M9	247	0.001	0.057	0.000	0.000	0.001	0.003	0.000	0.084	0.147	0.823	0	0.970	4000	4000	100%
M10	236	0.000	0.042	0.008	0.000	0.000	0.000	0.000	0.284	0.334	0.581	0	0.915	1000	1000	100%
M11	43	0.026	0.059	0.000	0.040	0.000	0.000	0.000	0.316	0.441	0.747	0	1.187	750	750	100%
M15	9	0.036	0.000	0.009	0.000	0.000	0.000	0.000	0.695	0.741	0.615	0	1.356	100	100	100%
M17	28	0.039	0.199	0.011	0.000	0.000	0.000	0.000	2.874	3.123	0.714	0	3.837	200	200	100%
M18	166	0.008	0.075	0.003	0.000	0.000	0.000	0.000	0.573	0.659	0.811	0	1.470	3000	1000	33%
M19	357	0.031	0.055	0.004	0.000	0.000	0.000	0.000	0.076	0.166	0.393	0	0.558	2000	2000	100%
M20	136	0.006	0.008	0.000	0.000	0.015	0.000	0.000	0.447	0.476	0.645	0.700	1.121	6000	3000	50%
M22	109	0.044	0.190	0.002	0.000	0.000	0.000	0.000	0.008	0.245	0.544	0	0.789	500	500	100%
M23	158	0.066	0.129	0.003	0.000	0.000	0.000	0.000	0.092	0.291	0.776	0.250	1.067	500	300	60%
AVE	137	0.026	0.076	0.004	0.003	0.001	0.000	0.001	0.421	0.531	0.662	0.130	1.193	1870	1057	72%
MIN	9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.074	0.393	0	0.558	100	100	10%
MAX	357	0.103	0.199	0.011	0.040	0.015	0.003	0.012	2.874	3.123	0.823	0.700	3.837	6000	4000	100%
TOTAL BIDS AND AWARDS:														28050	15850	57%

MAY 1983 LEAGUE III -- CO-OPS + FED S&LS UNWEIGHTED TOTAL BASIS
(For bids & awards, totals = 12 month amount + 6 month amount)

Bank Code	Mass Depts (\$Mil)	Small Bus	Stud x5	Exemp	Inv	CDC	Ment Hlth	Fd St x5	Mort x5	Total "C" In-St	Max Ex i	LDS Pts	Total Pts	\$Bid Total	\$Awd Total	Awd/Bid-%
C1	8	0.010	0.000	0.001	0.000	0.000	0.015	0.000	0.138	0.165	0.852	0	1.017	200	100	50%
C2	152	0.000	0.108	0.007	0.000	0.001	0.000	0.000	0.538	0.653	0.915	0.300	1.568	1300	1300	100%
C3	17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.068	1.068	0.927	0	1.996	300	150	50%
C4	47	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.168	0.189	0.647	0	0.836	1000	150	15%
C5	4	0.048	0.054	0.003	0.000	0.000	0.000	0.000	0.049	0.154	0.818	1.500	0.972	100	100	100%
C6	41	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.144	0.144	0.852	0	0.996	300	300	100%
C8	17	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.223	0.263	0.898	1.000	1.161	200	0	0%
C9	21	0.022	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.913	0	0.939	150	150	100%
C10	247	0.068	0.114	0.005	0.000	0.000	0.000	0.000	0.146	0.334	0.748	0	1.081	1500	500	33%
C11	41	0.000	0.000	0.000	0.015	0.000	0.000	0.000	2.914	2.929	0.928	0	3.856	400	400	100%
C12	75	0.000	0.106	0.000	0.010	0.000	0.000	0.000	0.000	0.116	0.721	0.700	0.837	400	250	63%
C13	294	0.062	0.047	0.002	0.000	0.000	0.000	0.000	0.228	0.338	0.743	0	1.082	1000	500	50%
C14	146	0.000	0.042	0.007	0.001	0.000	0.000	0.000	0.000	0.050	0.815	0	0.865	1000	500	50%
C15	21	0.000	0.000	0.000	0.110	0.000	0.000	0.000	0.000	0.110	0.762	1.500	0.871	10	10	100%
C16	163	0.079	0.137	0.008	0.000	0.000	0.000	0.000	0.172	0.397	0.843	0.200	1.240	2800	1400	50%
F1	264	0.000	0.030	0.015	0.000	0.000	0.001	0.000	0.000	0.046	0.527	0.700	0.573	1000	100	10%
F2	203	0.018	0.154	0.010	0.000	0.000	0.001	0.000	0.022	0.205	0.711	0	0.916	100	100	100%
F3	85	0.000	0.252	0.000	0.000	0.000	0.000	0.000	0.000	0.252	1.035	0	1.287	100	0	0%
F4	33	0.075	0.000	0.009	0.000	0.000	0.000	0.000	0.000	0.084	1.004	0	1.088	100	100	100%
AVE	99	0.023	0.055	0.004	0.007	0.000	0.001	0.000	0.306	0.396	0.824	0.311	1.220	629	322	62%
MIN	4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.527	0	0.573	10	0	0%
MAX	294	0.079	0.252	0.015	0.110	0.001	0.015	0.000	2.914	2.929	1.035	1.500	3.856	2800	1400	100%
TOTAL BIDS AND AWARDS:														11960	6110	51%

NOV. 1983 LEAGUE III -- CO-OPs + FED S&Ls UNWEIGHTED TOTAL BASIS
 (For bids & awards, totals = 12 month amount + 6 month amount)

Bank Code	Mass Depts (\$Mil)	Small Bus	Stud x5	Exemp Orgs	Inv Insts	CDC	Ment Hlth	Fd x5	St x5	Mort x5	Total "C" In-St	Max Ex i	LDS Pts	Total Pts	\$Bid Total	\$Awd Total	Bid/ Awd-%
C1	8	0.009	0.000	0.001	0.000	0.000	0.014	0.000	0.000	0.141	0.166	0.917	0	1.084	200	200	100%
C2	160	0.000	0.119	0.006	0.000	0.001	0.000	0.000	0.000	0.500	0.626	0.790	0.050	1.417	600	600	100%
C3	18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.395	1.395	0.865	0	2.260	150	150	100%
C5	4	0.033	0.064	0.002	0.000	0.000	0.000	0.000	0.000	0.043	0.142	0.893	1.250	1.035	50	50	100%
C6	43	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.089	0.089	0.863	0	0.952	300	300	100%
C7	15	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.793	0.793	0.840	0	1.633	150	100	67%
C10	249	0.073	0.125	0.005	0.000	0.000	0.000	0.000	0.000	0.177	0.380	0.600	0	0.980	3000	2000	67%
C11	42	0.000	0.000	0.000	0.014	0.000	0.000	0.000	0.000	2.480	2.495	0.938	0	3.433	600	400	67%
C12	78	0.000	0.131	0.000	0.009	0.000	0.000	0.000	0.000	0.000	0.140	0.736	0	0.876	500	250	50%
C13	294	0.072	0.035	0.003	0.000	0.000	0.000	0.000	0.000	0.228	0.338	0.725	0	1.063	2000	500	25%
C14	159	0.000	0.048	0.006	0.001	0.000	0.000	0.000	0.000	0.000	0.056	0.589	0	0.645	1000	500	50%
C15	24	0.006	0.005	0.000	0.180	0.000	0.000	0.000	0.000	0.000	0.191	0.727	0.700	0.918	20	20	100%
C16	162	0.067	0.132	0.008	0.000	0.000	0.000	0.000	0.000	0.237	0.444	0.809	0	1.252	2800	1400	50%
F3	88	0.000	0.234	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.280	1.118	0	1.398	100	100	100%
AVE	96	0.019	0.064	0.002	0.015	0.000	0.001	0.000	0.000	0.438	0.538	0.815	0.143	1.353	819	469	77%
MIN	4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.056	0.589	0	0.645	20	20	25%
MAX	294	0.073	0.234	0.008	0.180	0.001	0.014	0.000	0.000	2.480	2.495	1.118	1.250	3.433	3000	2000	100%
TOTAL BIDS AND AWARDS:															11470	6570	57%

SCORES BY LEAGUE AND BY PERFORMANCE CATEGORY: MAY 1983
AVERAGE, MINIMUM, MAXIMUM, RANGE (Range = max - min)

	Mass Depts (\$Mil)	Small Bus		Stud x5		Exemp Orgs		Inv Insts		CDC		Ment Hlth		Fd St x5		Mort x5		Total "C" In-St		Ex i		LDS Pts		Total Pts	
LEAGUE I	Ave.	267	0.284	0.044	0.002	0.058	0.003	0.002	0.002	0.002	0.003	0.002	0.002	0.002	0.021	0.086		0.500	0.699	0.000		1.199	1.199		
	Min.	150	0.032	0.004	0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003		0.245	0.587	0.000		0.833	0.833		
	Max.	435	0.454	0.090	0.007	0.007	0.147	0.018	0.008	0.008	0.008	0.008	0.008	0.008	0.077	0.207		0.742	0.795	0.000		1.490	1.490		
	Range	285	0.422	0.086	0.007	0.007	0.140	0.018	0.008	0.008	0.008	0.008	0.008	0.008	0.077	0.204		0.497	0.208	0.000		0.657	0.657		
LEAGUE II	Ave.	73	0.248	0.064	0.002	0.044	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.035	0.216		0.611	0.686	0.151		1.297	1.448			
	Min.	4	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		.232	0.277	0.000		0.739	0.739			
	Max.	148	0.588	0.301	0.011	0.260	0.012	0.005	0.005	0.005	0.005	0.005	0.005	0.274	1.009		1.344	1.093	0.600		2.437	2.437			
	Range	144	0.577	0.301	0.011	0.260	0.012	0.005	0.005	0.005	0.005	0.005	0.005	0.274	1.009		1.344	0.816	0.600		1.698	1.698			
LEAGUE IIIM	Ave.	202	0.029	0.090	0.006	0.003	0.001	0.000	0.002	0.002	0.001	0.000	0.000	0.635		0.765	0.687	0.141		1.451	1.592				
	Min.	8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.115	0.350	0.000		0.786	0.786				
	Max.	993	0.126	0.317	0.036	0.050	0.013	0.000	0.015	0.015	0.013	0.000	0.015	2.687		2.926	1.095	1.200		3.668	3.668				
	Range	985	0.126	0.317	0.036	0.050	0.013	0.000	0.015	0.015	0.013	0.000	0.015	2.687		2.811	0.745	1.200		2.882	2.882				
LEAGUE IIIC	Ave.	99	0.023	0.055	0.004	0.007	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.306		0.396	0.824	0.311		1.220	1.531				
	Min.	4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.026	0.527	0.000		0.573	0.836				
	Max.	294	0.079	0.252	0.015	0.110	0.001	0.015	0.001	0.015	0.001	0.015	0.000	2.914		2.929	1.035	1.500		3.856	3.856				
	Range	290	0.079	0.252	0.015	0.110	0.001	0.015	0.001	0.015	0.001	0.015	0.000	2.914		2.903	0.508	1.500		3.283	3.020				
LEAGUE III	Ave.	151	0.026	0.073	0.005	0.005	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.471		0.581	0.756	0.226		1.336	1.562				
	Min.	4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.026	0.350	0.000		0.573	0.786				
	Max.	993	0.126	0.317	0.036	0.110	0.013	0.015	0.013	0.015	0.013	0.015	0.015	2.914		2.903	1.095	1.500		3.856	3.856				
	Range	989	0.126	0.317	0.036	0.110	0.013	0.015	0.013	0.015	0.013	0.015	0.015	2.914		2.877	0.745	1.500		3.283	3.070				

SCORES & AWARDS: SUMMARY RESULTS -- MAY 1983

SCORES: LDS SCORE + INTEREST RATE IN EXCESS OF MINIMUM REQUIRED BID
AWARDS & BIDS: UNWEIGHTED TOTAL BASIS (12-mo amount + 6-mo amount)

LEAGUE I: BIG CBs					LEAGUE II: OTHER CBs					LEAGUE "IIIM": MSBs ONLY					LEAGUE "IIIC": COOPs+S&Ls ON				
Rank	Bank	Score	Awd/ Bid%	\$Awd	Rank	Bank	Score	Awd/ Bid%	\$Awd	Rank	Bank	Score	Awd/ Bid%	\$Awd	Rank	Bank	Score	Awd/ Bid%	\$Awd
1	I7	1.490	67%	2000	1	II21	2.437	43%	2300	1	M17	3.668	100%	1000	1	C11	3.856	100%	400
2	I5	1.361	77%	2700	2	II28	2.174	42%	2500	2	M9	3.160	25%	500	2	C5	2.472	100%	100
3	I8	1.320	65%	8500	3	I6	2.044	100%	2000	3	M13	2.951	50%	1000	3	C15	2.371	100%	10
					4	II17	1.786	50%	1390	4	M20	2.842	29%	1000	4	C8	2.161	0%	0
					5	II11	1.748	90%	900	5	M18	1.782	25%	500	5	C3	1.996	50%	150

TOP BANKS:

Ave Score:	1.390	2.038	2.881	2.571
Ave Awd/Bid %:	70%	65%	46%	70%
Total \$ Award:	13200	9090	4000	660

4	I2	1.129	33%	1000	15	M1	0.868	25%	500	15	C1	1.017	50%	100
5	I4	1.064	50%	1000	16	M7	0.863	100%	1000	16	C6	0.996	100%	300
6	I3	0.833	75%	3750	17	M6	0.811	10%	500	17	C9	0.939	100%	150
					18	II32	0.775	67%	1000	18	C14	0.865	50%	500
					26	II3	0.739	50%	1000	19	C4	0.836	15%	150

BOTTOM BANKS:

Ave Score:	1.009	0.905	0.824	0.931
Ave Awd/Bid %:	53%	63%	67%	63%
Total \$ Award:	5750	3700	6500	1200

Banks w/ Bids: 6

19

19

Banks w/ Awards: 6

19

17

SCORES & AWARDS: SUMMARY RESULTS -- NOVEMBER 1983

SCORES: LDS SCORE + INTEREST RATE IN EXCESS OF MINIMUM REQUIRED BID
AWARDS & BIDS: UNWEIGHTED TOTAL BASIS (12-mo amount + 6-mo amount)

LEAGUE I: BIG CBS				LEAGUE II: OTHER CBS				LEAGUE "IIIM": MSBs ONLY				LEAGUE "IIIC": COOPs+S&Ls			
Rank	Bank Code	Score	Awd/Bid	Rank	Bank Code	Score	Awd/Bid	Rank	Bank Code	Score	Awd/Bid	Rank	Bank Code	Score	Awd/Bid
1	I7	1.458	40	1	II25	2.224	71	1	M17	3.837	100	1	C11	3.433	67
2	I5	1.299	100	2	II22	2.191	33	2	M20	1.821	50	2	C5	2.285	100
3	I8	1.145	63	3	II17	2.115	65	3	M18	1.470	33	3	C3	2.260	100
4	I6	1.144	100	4	II16	2.072	25	4	M15	1.356	100	4	C7	1.633	67
				5	II16	1.905	26	5	M8	1.348	50	5	C15	1.618	100

TOP BANKS:

Ave Score:	1.262	2.101	1.966	2.246
Ave Awd/Bid %:	76	44	67	87
Total \$ Award:	13000	5300	4800	720

5	I1	1.128	22	1000	11	M10	0.915	100	1000	10	C13	1.063	25	500
6	I4	1.088	17	1000	20	II32	0.975	50	1000	11	C10	0.980	67	2000
7	I2	1.036	60	3000	21	II19	0.921	100	500	12	C6	0.952	100	300
8	I3	0.756	52	3000	22	II14	0.878	100	500	13	C12	0.876	50	250
					23	II13	0.837	33	2000	14	C14	0.645	50	500

BOTTOM BANKS:

Ave Score:	1.002	0.918	0.790	0.903
Ave Awd/Bid %:	38	67	82	58
Total \$ Award:	8000	4450	5000	3550

Banks w/ Bids: 8 23 15 14

Banks w/ Awards: 8 23 15 14